

# Army Lodging Wellness Recommendation

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## Fort Bragg - Final Submittal

August 15, 2003

**3D/I**

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## Introduction

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# Section 1 Wellness Recommendation

The Army Lodging Wellness Program is conducted under the direction and guidance of Headquarters Army, Lodging Division (CFSC). The goal of the Fort Bragg Lodging Wellness Plan is to provide a comprehensive assessment and planning tool to support long term capitalization of Army Lodging facilities. The Demand Analysis determines installation Lodging requirements, and reviews off-post Lodging availability and cost, arriving at the most economical solution for meeting total transient requirements and providing a final determination of the appropriate number and configuration of on-post Lodging rooms. Individual Lodging facility condition (building and building systems) and functional assessments are included with both recommendations and costs. Facility improvement and renovation versus replacement/new construction recommendations are developed based on the individual facility assessments and cost. A Lodging Master Plan for the installation is developed including renovation, replacement/new construction, and proposed new facility siting. A final recommendation defines the method for achieving the final wellness solution for the installation and will assist with project planning.

## Methodology

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### ***Demand***

- Demand for Lodging facilities is analyzed and adjusted for atypical past occurrences and for expected changes in the installation's population, housing or mission. Two primary methods are used to calculate the optimum number of rooms: the number necessary to meet 80% of official demand and the number projected to be the most efficient from an operating cost perspective.
- The off-post private market is assessed for capacity and representative rates. A determination is made if the private market has the capability to handle overflow requirements of official demand.
- Room mix recommendation is based on the segmentation of the Permanent Change of Station (PCS)/Temporary Duty (TDY) mix and the expected lengths of stay. This produces the final determination of the appropriate number and configuration of rooms for the installation.

### **Assessment**

- Existing Lodging facilities are assessed based on building and building system conditions followed by an assessment for conformance with Army Lodging functional standards. Facilities assessed to be in fair to good condition and meeting the majority of functional requirements are considered for renovation. Renovation of Lodging facilities found in poor condition and configured significantly different from current standards will typically exceed 50% of the replacement cost and are recommended for replacement/new construction. This decision is supported by renovation cost comparisons and assessment documentation.
- The age, condition and existing configuration of all of the existing Lodging buildings support a finding of replacement through new construction.
- Force protection construction criteria have a significant impact on new construction. This Wellness recommendation, including building assessment, site analysis and proposed construction, incorporates requirements from the UFC 4-010-01. Consistent with this guidance, force protection mitigation is not considered unless the renovation cost exceeds 50% of the replacement cost for a facility.

## **Demand Summary**

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Based on the historic and expected demand pattern at this facility it is our recommendation that the number of rooms be sized using the “Most Economically Efficient” criterion. Using this criterion, we expect an occupancy rate of 77% which meets 83% of the projected official demand.

### **Room Count and Mix Recommendation**

- 612 total rooms
- Room mix:
  - 371 standard guest rooms
  - 195 extended-stay guest rooms offering a kitchenette
  - 46 extended-stay family suites offering a separate bedroom, sitting/living area, and kitchenette

The demand analysis has determined a need of 612 rooms; however, based on proposed building configurations, the actual number recommended for the Fort Bragg Wellness Plan will be 614 rooms.

## Lodging Summary

The following Lodging for Fort Bragg is summarized by building, including number of existing rooms and number of proposed rooms determined as part of the installation Wellness recommendation. The table also indicates the number of rooms required for a new Lodging facility based on buildings not proposed for re-use due to poor existing conditions and high renovation costs. The number of rooms for the new proposed Lodging facility reflects the proposed layout and does not match the exact demand numbers, because of building configuration.

Building Number	Existing Rooms					Wellness Recommendation (FY 08)			
	Total Rooms	Std Rms 300 sf	Extend. Stay Rms 300 sf	Family Suites 450 sf	Other Rooms	Total Rooms	Std Rms 300 sf	Extend. Stay Rms 300 sf	Family Suites 450 sf
<b>Wellness Recommendation based on Demand Analysis</b>									
						612	370	195	47
<b>Existing Lodging Facilities</b>									
1-1939	39	35		4		0			
1-4425	1				1	0			
1-4428	20	2		18		0			
5-5047	24	24				0			
D3601	258	242		16		0			
D3705	266	258		8		0			
D4215	74	74				0			
<b>Totals</b>	<b>682</b>	<b>635</b>	<b>0</b>	<b>46</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>New Proposed Lodging Facility</b>									
						614	368	196	50
<b>Total Lodging Rooms</b>									
						614	368	196	50

### Summary of Room Count and Mix based on Configuration

- 614 total rooms
- Room mix:
  - 368 standard guest rooms
  - 196 extended-stay guest rooms offering a kitchenette
  - 50 extended-stay family suites offering a separate bedroom, sitting/living area, and kitchenette
  -

## Cost Summary

### Project Cost

The following table summarizes the Condition Analysis, Renovation, and Replacement Cost by individual Lodging facilities. The Wellness Recommendation indicates cost by building based on recommendation, including the proposed facility cost.

Building Number	Existing Units					Wellness Recommendation (FY 08)			
	Total Rooms	Condition Analysis Cost*	Renovation Cost**	Replacement Cost	% Condition Analysis or Renovation Cost Ratio	Total Rooms	Total Cost	Renovation Cost	New Construction Cost
<b>Existing Lodging Facilities</b>									
1-1939	39	\$ 1,508,535	****	\$ 2,897,230	52.07%	0			
1-4425	1	\$ 282,750	****	\$ 291,180	97.10%	0			
1-4428	20	\$ 1,518,995	****	\$ 2,048,735	74.14%	0			
5-5047	24	\$ 1,136,760	****	\$ 1,584,945	71.72%	0			
D3601	258	\$ 13,699,240	****	\$ 20,224,820	67.73%	0			
D3705	266	\$ 12,572,980	****	\$ 20,224,820	62.17%	0			
D4215	74	\$ 3,763,530	****	\$ 6,066,490	62.04%	0			
<b>Totals</b>	<b>682</b>					<b>0</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>New Proposed Lodging Facility</b>									
						<b>614</b>	<b>\$ 50,080,345</b>		<b>\$ 50,080,345</b>
<b>Total</b>									
						<b>614</b>	<b>\$ 50,080,345</b>	<b>\$ -</b>	<b>\$ 50,080,345</b>

- \* The Condition Analysis Cost is for making the building well based on Army Lodging Standards without changing how the building functions.
- \*\* The Renovation Cost is for making the building well based on Army Lodging Standards including making functional changes.
- \*\*\* If the Condition Analysis Cost is under 50% of the Replacement Cost, the Renovation Cost is used.
- \*\*\*\* If the Condition Analysis Cost is over 50% of the Replacement Cost, a Renovation Cost is not included.

### Cost per Room Comparison

The Wellness Recommendation includes review of off-post Lodging costs compared to the proposed new construction costs on-post. The new construction costs include operating costs, capital assessment costs, and sustainment capital expenditures. The following table summarizes this comparison per room for FY08.

	New Building
Cost per Room at Fort Bragg	\$ 55.39
Off Post Cost per Room	\$ 65.36
Difference between On-Post and Off-Post Lodging per room	\$ 9.98
% Savings of On-Post to Off-Post Lodging	15.3%

The Cost Per Room at Fort Bragg is based on:  
 Renovation / New Construction Cost w/ inflation to FY 08  
 Current Operating Cost w/ inflation to FY 08  
 Cap Ex Cost  
 Capital Assessment Cost to FY 08  
 Off Post Cost is based on current room rate average with inflation to FY 08

Due to this cost difference and the savings of 15.3%, it is our recommendation that the Army construct a new Lodging facility at Fort Bragg in lieu of using off-post lodging to support the determined demand requirement. Off-post lodging will continue to be used for demand beyond the on-post room requirement.

## Recommendations / Conclusions

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The Wellness Recommendation for Fort Bragg is to construct a new main Lodging facility on-post to accommodate 614 rooms, and all the public and back-of-the-house spaces. The new facility will include 614 rooms to meet the 612 room requirement. The number of rooms for the new proposed Lodging facility reflects the proposed layout and does not match the exact demand numbers, because of building configuration. All existing Lodging facilities do not meet condition and/or functional requirements based on cost and shall be removed from the Lodging inventory. A synopsis of recommended building actions follows:

- Construct a new Lodging facility to include 614 rooms. This building will be planned to include public and back-of-the-house Lodging functions for the total on-post Lodging inventory.
- Remove all other existing on-post Lodging buildings from the Lodging inventory due to condition of existing building systems and/or cost to renovate to meet Army functional criteria.

### ***Cost Summary***

The cost for this recommendation will be:

New Lodging Facility	\$50,080,345
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### ***Phasing***

Recommend the following phasing as funding is identified.

- Minimize investment in infrastructure for buildings 1-1939, 1-4425, 1-4428, 5-5047, D3601, D3705, and D4215.
- Construct new Lodging facility prior to removing existing Lodging facilities from inventory.
- Remove buildings 1-1939, 1-4425, 1-4428, 5-5047, D3601, D3705, and D4215 from Lodging inventory.

# Section 2 Lodging Master Plan



Fort Bragg, located in southeastern North Carolina within the Fayetteville community, is home to the XVIII Airborne Corps. The primary mission of the installation is to maintain the Airborne Corps as a strategic crisis response force, manned and trained to deploy rapidly by air, sea and land anywhere in the world. With construction dating back to late 1800s, this installation is historically significant with respect to facilities and the mission.

The Fort Bragg Installation Guide incorporates specific installation requirements. Land use, future development, and architectural compatibility are integral components of the Guide. Current Lodging room night requirements, Army guidance on Lodging facility design standards, and force protection construction standards required additional analyses, and were incorporated into the recommendations of this Lodging Wellness Plan.

The character of Fort Bragg has been preserved and enhanced through the use of brick and stucco. Medium to low sloped roofs, medium shades of red brick, small window and exterior openings, often shaded by overhangs or balconies, and long, low building masses exemplify the desired architecture of the installation.

## Master Plan Summary

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All Lodging facilities at Fort Bragg were constructed in various phases and are located in several areas of the installation. A thorough condition and functional assessment of the existing buildings noted significant deficiencies. Additionally, renovation of these buildings to the new Lodging standards and building configuration design is not viable within the 50% threshold. The primary Lodging area is located in the center of the installation, as is recommended for planning future Lodging growth.

The proposed Fort Bragg Lodging Master Plan reflects the 612 Lodging room requirement with replacement of all existing Lodging buildings into a new Lodging facility. The number of rooms for the new proposed Lodging facility reflects the proposed layout and does not



match the exact demand numbers, because of building configuration. This new facility will combine required rooms, public areas and service functions into a cohesive Lodging physical plant in support of the installation requirements.

Siting of the new 614 room Lodging facility is recommended within the center of the installation, adjacent to the historic district.

## Existing Lodging Facilities

### ***Lodging Building 1-1939 (Forrestal)***

Building 1-1939, constructed in 1968, has 35 standard and 4 family Lodging suites. The building is in poor condition, but does meet a majority of the Army functional standards. The cost to make condition assessment improvements will exceed the 50% replacement cost.

Our recommendation is remove 1-1939 from the Lodging inventory, allowing the installation to determine an alternate use for the facility. This facility will be removed from the Fort Bragg Wellness Solution and Lodging Master Plan.



### ***Lodging Building 1-4425 (Sink)***

Building 1-4425, constructed in 1931, is a single family suite with 2 bedrooms, living room, sun room, den dining room and kitchen. The building is in poor condition and does not meet Lodging standards. The cost to make condition assessment improvements will exceed the 50% replacement cost.

Our recommendation is to remove 1-4425 from the Lodging inventory, allowing the installation to determine an alternate use for the facility. This facility will be removed from the Fort Bragg Wellness Solution and Lodging Master Plan.



### ***Lodging Building 1-4428 (Normandy)***

Building 1-4428, constructed in 1935, has 2 standard and 18 multi-room suites. The building is in poor condition and does not meet Lodging standards. The cost to make condition assessment improvements will exceed the 50% replacement cost.

Our recommendation is to remove 1-4428 from the Lodging inventory, allowing the installation to determine an alternate use the facility. This



facility will be removed from the Fort Bragg Wellness Solution and Lodging Master Plan.



***Lodging Building 5-5047 (Leal)***

Building 5-5047, constructed in 1969, has 24 standard rooms. The building is in poor condition and does not meet Lodging standards. The cost to make condition assessment improvements will exceed the 50% replacement cost.

Our recommendation is to remove 5-5047 from the Lodging inventory, allowing the installation to determine an alternate use for the facility. This facility will be removed from the Fort Bragg Wellness Solution and Lodging Master Plan.



***Buildings D3705 and D3601 (Hardy & Moon)***

Buildings D3705 and D3601, constructed in 1966, are large, nearly identical 6-story facilities with 258 & 242 standard rooms and 8 & 16 family suites respectively. Although these facilities were renovated recently, they still have significant system deficiencies and do not meet Lodging standards. The cost to make condition assessment improvements will exceed the 50% replacement cost.

Our recommendation is to remove D3705 and D3601 from the Lodging inventory, allowing the installation to determine an alternate use for these facilities. These facilities will be removed from the Fort Bragg Wellness Solution and Lodging Master Plan.



***Lodging Building D4215 (Delmont)***

Building D4215, constructed 1971, has 74 extended stay rooms. This facility is in poor condition and does not meet Lodging standards. The cost to make condition assessment improvements exceed the 50% replacement cost.

Our recommendation is to remove D4215 from the Lodging inventory, allowing the installation to determine an alternate use for the facility. This facility will be removed from the Fort Bragg Wellness Solution and Lodging Master Plan.



## New Lodging Building

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The proposed Lodging facility is comprised of 614 rooms; 368 standard guest rooms, 196 extended stay guest rooms, and 50 family suites. The number of rooms for the new proposed Lodging facility reflects the proposed layout and does not match the exact demand numbers, because of building configuration. The lobby and back-of-the-house spaces are sized for the 614 total rooms at the installation.

The proposed new construction will be sited within the center of the post, adjacent to the historic district. The lobby will be constructed of glass exterior curtain walls to enhance the entrance to the facility, while maximizing the view and connection to the historic area. The proposed building construction is steel frame with CMU infill walls, sloped tile roof, and a brick exterior veneer. The architectural guidance for Fort Bragg is incorporated into the cost of the new facility.

The mass and scale of the proposed building is critical. Based on the number of required rooms and to limit the length of the wings, the recommendation of this plan is to provide varying roof levels to promote interest and character, while providing relief from the scale of the facility. The core area and four building wings will maintain a 6-story height, tapering to a 5-story height for the remaining 2 building wings. Family suites are located at the end of the wings for privacy and the entrance will be emphasized with a single story covered drop-off area, providing a pedestrian scale and emphasis.

### ***Areas and Occupancy***

The following chart indicates all spaces and size for the proposed new construction based on program and the proposed conceptual building plan.

ROOM / SPACE	PROGRAMMED FLOOR AREA			PLAN FLOOR AREA
	No. Req'd	Net Area Per Room	Total Net Area	
<b>Total Area including 8% Add On Factor</b> (does not include Outside Areas)*			<b>304,512</b>	<b>308,065</b>
<b>Public Areas</b>			<b>72,684</b>	<b>72,669</b>
Exterior Entrance	N/A	N/A		-
Vestibule	1	1	-	-
Lobby (includes vestibule)	1	1,000-1,200	1,000-1,200	1,202
Front Desk	4 stations	300	300	300
Bell Cart Station	6	12	72	76
Breakfast Bar (Seat/Svc) - min.	1	550	550	568
Passenger Elevators	3 elev @ 5 floors	64	960	960
Stairs	10	230	11,500	8,760
Public Corridors	-	-	51,830	51,894
Public Telephone Area	4	6	24	24
Vending - Full Service	5	70	350	1,616
Vending - Ice Only	3	30	90	480
Women - Lobby	1	315	315	261
Men - Lobby	1	315	315	261
Multi-Purpose Room - min.	1	250	250	384
Study Rooms (1 per 25 ext stay units)	8	250	2,000	2,224
Guest Laundries (2 w/d per 75 units)	5	192	1,728	2,519
Gear Wash Rooms - min.	4	170	680	613
Guest Bulk Storage (1 per 4 family suites)	13	25 ea. 40 w/circ.	520	527
<b>Guest Rooms</b>	<b>614</b>		<b>191,700</b>	<b>191,700</b>
Guest Room - Standard	368	300	110,400	110,400
Guest Room - Ext. Stay	196	300	58,800	58,800
Guest Room - Family Suites	50	450	22,500	22,500
<b>Back-of-House Areas</b>			<b>17,572</b>	<b>20,773</b>
Manager's Office	1	180	180	182
Assistant Manager Offices	1	120	120	121
Front Office Manager	1	100	100	101
Admin. Offices	7 staff	800-900	800-900	807
Cash Room	1	125	125	101
Luggage Storage	1	100	100	108
Admin. Conference Room	1	350	350	384
Housekeeping Office	1	120	120	150
Dirty/Clean Linen Storage	-	200	-	-
In-House Laundry - min.	1	750	750	751
Receiving Office	1	75	75	101
Maintenance Area	1	400	400	411
Kitchen Prep Room	1	150	150	170
Break Room	1	350	350	346
Staff Toilet - Men	1	150	150	100
Staff Toilet - Women	1	200	200	100
Access Corridor	-	-	600	596
Receiving - min.	1	150	150	275
Housekeeping Rooms (1 per 15 units)	41	128	5,248	5,509
Service Elevator	1	80	400	84
Data/Commo Room	1	150	150	152
Switch Closets	13	16	208	2,175
Janitor Closet	1	50	50	108
Mechanical Room	-	-	4,912	4,998
General Storage Room - min.	1	500	500	775
Bulk Storage Room - min.	1	500	500	847
Electrical Room	5	140	700	1,205
Elevator Equipment Room	1	84	84	116
<b>Exterior</b>			<b>400</b>	
Playground (Outdoor)	1	-	-	-
Grounds Maintenance	1	400	400	-

\* Add on factor to cover s.f. for partitions and any space not included in numbers above.

### **Cost Summary**

The New Construction Cost \$50,080,345

- The cost is for a building of 614 rooms.
- All costs are adjusted by the Area Cost Factor of 88% for Fort Bragg.

### **Cost Analysis**

#### **Summary of Project Replacement Cost (based on 308,065 s.f.)**

<b>CSI</b>	<b>Percent</b>	<b>Amount</b>
<b>02 Site Work</b>	<b>2.42%</b>	<b>\$818,492.93</b>
Parking Lots		\$452,108.80
Site Earthwork		\$366,384.13
<b>03 Concrete</b>	<b>26.01%</b>	<b>\$8,799,219.05</b>
Floor Construction		\$6,990,044.65
Slab on Grade		\$271,348.00
Stair Construction		\$181,104.00
Standard Foundations		\$1,356,722.40
<b>04 Masonry</b>	<b>3.52%</b>	<b>\$1,190,800.32</b>
Exterior Walls		\$1,190,800.32
<b>07 Thermal &amp; Moisture Protection</b>	<b>4.16%</b>	<b>\$1,406,384.19</b>
Roof Construction		\$741,228.33
Roof Coverings		\$665,155.86
<b>08 Doors &amp; Windows</b>	<b>8.22%</b>	<b>\$2,780,966.32</b>
Exterior Doors		\$47,899.28
Exterior Windows		\$2,196,480.00
Interior Doors		\$536,587.04
<b>09 Finishes</b>	<b>17.19%</b>	<b>\$5,814,178.07</b>
Ceiling Finishes		\$1,501,507.43
Floor Finishes		\$2,119,863.60
Partitions		\$1,216,739.15
Wall Finishes		\$976,067.89
<b>10 Specialties</b>	<b>0.01%</b>	<b>\$2,982.76</b>
Fittings		\$2,982.76
<b>11 Equipment</b>	<b>2.31%</b>	<b>\$780,656.36</b>
Commercial Equipment		\$21,296.00
Other Equipment		\$759,360.36
<b>13 Special Construction</b>	<b>4.83%</b>	<b>\$1,633,493.77</b>
Communications & Security		\$735,343.54
Sprinklers		\$898,150.23
<b>14 Conveying Systems</b>	<b>0.56%</b>	<b>\$189,024.00</b>
Elevators and Lifts		\$189,024.00
<b>15 Mechanical</b>	<b>14.80%</b>	<b>\$5,005,918.72</b>
Cooling Generating Systems		\$2,170,755.84
Domestic Water Dist		\$1,015,344.00
Plumbing Fixtures		\$1,819,818.88
<b>16 Electrical</b>	<b>6.90%</b>	<b>\$2,334,293.28</b>

Electrical Service & Distribution		\$2,316,908.88
Site Lighting		\$17,384.40
<b>19 FF&amp;E</b>	<b>9.08%</b>	<b>\$3,070,000.00</b>
Interior FF&E allowance		\$3,070,000.00
Total Raw Cost	100.00%	\$33,826,409.77
<b>Additional Hard Cost (Template: Army Lodging New Construction)</b>		
<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Spirit	0.50%	\$186,045.25
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$3,382,640.98
<b>Total Additional Hard Cost</b>		<b>\$3,568,686.23</b>
<b>Soft Cost (Template: Army Lodging New Construction)</b>		
<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$1,869,754.80
SIOH Conus	6.50%	\$2,552,215.30
Design	10.00%	\$3,739,509.60
08 MYr Inflation Fct	9.93%	\$4,523,767.97
<b>Total Soft Cost</b>		<b>\$12,685,247.67</b>
<b>Total Project Cost for Replacement</b>		<b>\$50,080,343.67</b>

**INSERT PROPOSED CAMPUS AREA ANALYSIS DRAWING HERE**

**INSERT LODGING MASTER PLAN DRAWING HERE**



INSERT **PROPOSED LODGING FACILITY (FLRS. 1-3)** DRAWINGS HERE

### Section 3 Demand Analysis

Fort Bragg's mission is to maintain the XVIII Airborne Corps as a strategic crisis response force. Because of this mission, it is an extremely active installation. Activity intensified at the installation in 2002 and 2003 due to the deployment of personnel to Iraq.

The population of Fort Bragg has remained relatively constant over the last five years. Of the cumulative population change of 5.5% between 1998 and 2002, 64% of it occurred in 2002. This increase was due to mobilization efforts mentioned above; it is deemed exceptional, and expected to level out after demobilization. Growth is projected to be 2.7% over the next five years.

The majority (89%) of the personnel seeking lodging on Ft. Bragg are individuals on Temporary Duty (TDY). Permanent Change of Station (PCS) demand represents 7% of the total, and the remaining 4% are unofficial travelers. Unofficial demand is not used in the calculation of recommended room inventory. As seen in the chart below, the majority of TDY personnel (66%) stay longer than 14 days; an average of 40 days. The majority of PCS average a 5-day stay. The table below describes the official demand population at this installation.

<b>Fort Bragg Official Market Demand Analysis</b>		
	<b>TDY</b>	<b>PCS</b>
<b>Total Demand:</b>	89%	7%
<b>Market Segmentation:</b>		
Individuals	100%	< 10%
Families	0%	> 90%
<b>Average Length of Stay (Days):</b>		
14 days or less	34% (3 days)	71% (5 days)
More than 14 days	66% (40 days)	29% (24 days)

*Source: Fort Bragg Lodging Administration, compiled by 3D/I*

## On-post Inventory

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At this installation, there are 682 rooms in seven primary buildings. The majority (520) are located in Moon and Hardy Hall. Due to the ongoing mobilization and the remodeling of barracks, there are currently 115 rooms shared by two occupants.

## Demand and Utilization

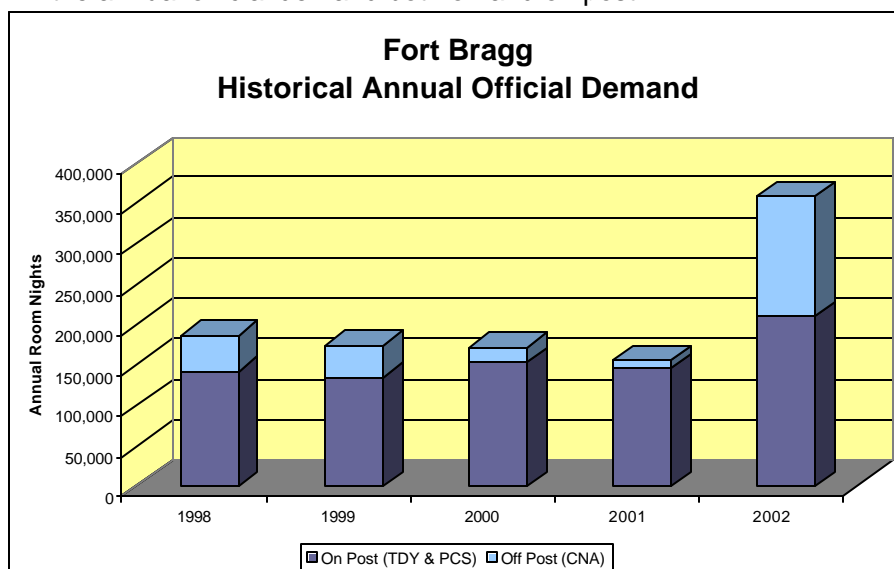
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### ***Data Summary***

Annual official demand at Fort Bragg was fairly consistent from 1998 through 2001. There was only a 17% range in total demand, and no two years experienced a change of more than 9.6%. Room nights ranged from 156,000 to 186,000, with a four-year average of 172,000. Demand in 2002 rose to 358,000. Daily demand inclusive of Certificates of Non-Availability (CNAs) ranged from 425 to 507 per day, with an average of 470 from 1998-2001; daily demand in 2002 averaged 980 room nights.

While some buildings were undergoing renovation in 1998 and 1999, CNAs ranged from 104 to 120 per night. CNAs dropped to between 29 and 51 room nights when the buildings became available again. CNAs in 2001 averaged 29 rooms per night then peaked at 404 in 2002.

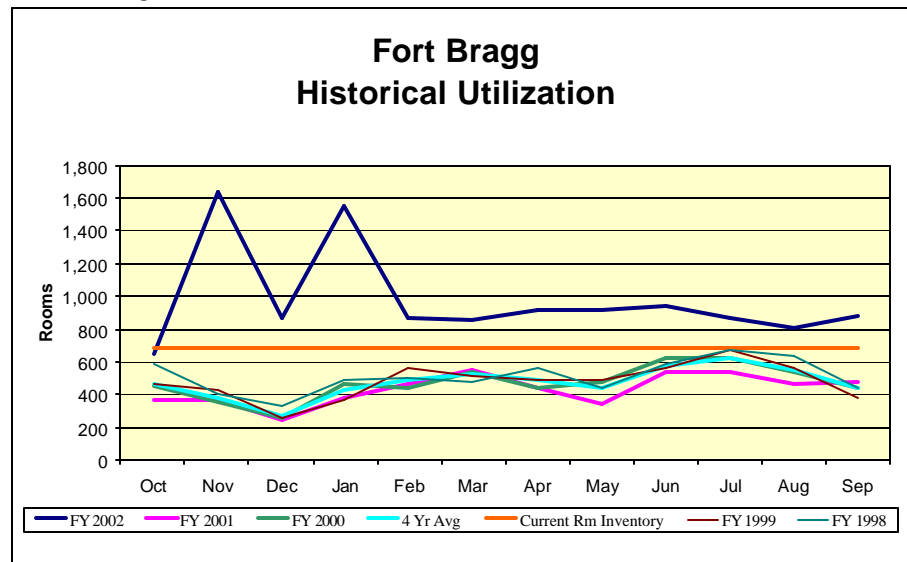
A summary of historical data is presented in the chart below; it identifies the annual official demand both on and off post.



Source: Fort Bragg Lodging Administration, compiled by 3D/I

Based upon an inventory ranging from 661 to 682 rooms over the last five years, the occupancy ranged from 64% to 73%. The 2002 occupancy rate nears 89%. Given these data, it appears that, on an annualized basis, there is minimal risk of vacancy with occupancy exceeding 80%. However, it is important to consider these findings on a seasonal basis as well.

A summary of historical utilization data by month is presented in the following chart.



Source: Fort Bragg Lodging Administration, compiled by 3D/I

The monthly variance in 2002 was a result of the intensified activity levels at the installation with the deployment of personnel to Iraq. Comparing the same month between 1998 and 2001 indicates that monthly variances between these years have not been too significant. Demand trends have shown relatively consistent relationships over time.

### **Seasonality**

As in the surrounding private market, there is little seasonality to the demand cycle for lodging at Fort Bragg. There is a reduced demand in December and a slight increase in June through August. If 2002 rates are factored out as a significant exception, daily room demand peaks in July at 623 and drops to 270 in December. Overall, demand estimates do not have to be adjusted for seasonality.

### **Factors Influencing Demand**

With regard to official PCS demand, there is a plan under the Residential Communities Initiative (RCI) to transfer assets and operations of the family housing units at Fort Bragg to Picerne Real Estate in late

FY2003/FY2004. Currently there are 3,357 family housing units at Fort Bragg; the privatization plan includes the construction of an additional 815 units. While one could project this addition of housing inventory to reduce the waiting period for permanent housing, it is important to note that there will be a net increase of 1,391 military personnel over the next four years who will absorb this increase.

Although the installation is not attempting to create enough lodging facilities to accommodate unofficial travelers, there is still the 4% unofficial market that represents opportunity for revenue when rooms are available. While the number of unofficial travelers has remained fairly constant in the last four years, this number is expected to increase due to reunions and visits to a new Airborne Museum that recently opened near the installation.

## Private Market Capability

The commercial lodging market within a 30-minute rush-hour driving time radius of the installation offers 57 properties consisting of 4,657 rooms. Although approximately 60% of these surrounding properties are major lodging chain affiliates, the remainder of the market contains some small, older properties that offer fewer amenities than standard. These properties might not be as desirable by personnel, especially if they require an extended stay.

Since the regional market in this part of North Carolina is very dependent upon the Army installations for business, most trends found off post are consistent with those on post.

Regional private lodging has typically had an occupancy rate around the 50 percentile, and the rate was trending downward after 1997. An exceptional rate of 69% occurred in 2002, when Fort Bragg and adjacent Pope Air Force Base sent over 150,000 CNAs off post; again, this is consistent with intensive deployment. During more representative years, Pope Air Force Base sent approximately 50,000 room nights off base. Fort Bragg does not have the capacity to meet the demand.

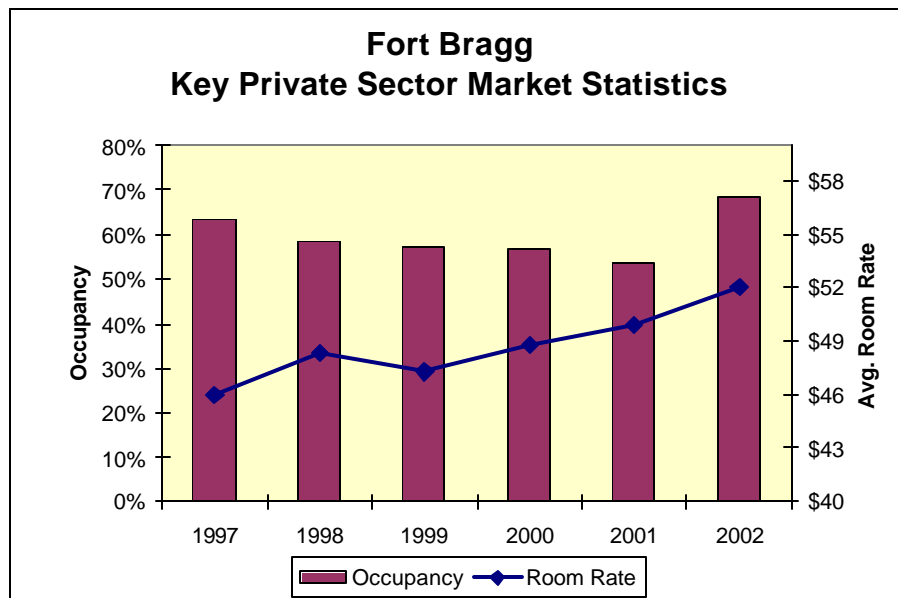
There is one privately-owned, 200-room motel located on the installation that has been contracted to handle the demand from specific units associated with the current deployment that cannot be accommodated in official lodging facilities. The Landmark Inn opened in February of 2001 to serve "authorized users of morale, welfare and recreation activities."

Occupancy at this conveniently-located property has exceeded 90% since November 2001 after the events of September 11, 2001.

As with installation lodging, a review of occupancy in the private market by month does not reveal exceptional seasonal variance. While there is the expected downturn in winter months with an increase in summer, there are no strong seasonal peaks in these data that would suggest an intermittent inability to lodge personnel off post.

As seen in the chart below, the average daily rate (ADR) of the market area has increased approximately 7.7% during the last five years with most of that increase occurring in 2002. The 2002 ADR is \$52.06 for 57 properties, and \$59.46 at the 27 off-post referral properties. Note that these rates are still below the \$63.00 per diem rate for Fort. Bragg. Therefore, the ability to lodge personnel off post within government rates is also possible.

The chart below describes key private market statistics.



Source: Smith Travel Research, compiled by 3D/I

In summary, it is reasonable to assume from these data that--although some off post facilities are older, of lesser quality and offer limited amenities--the private market does have sufficient capacity to support the overflow lodging requirements that Fort Bragg personnel might encounter.

## Demand Requirement Determination

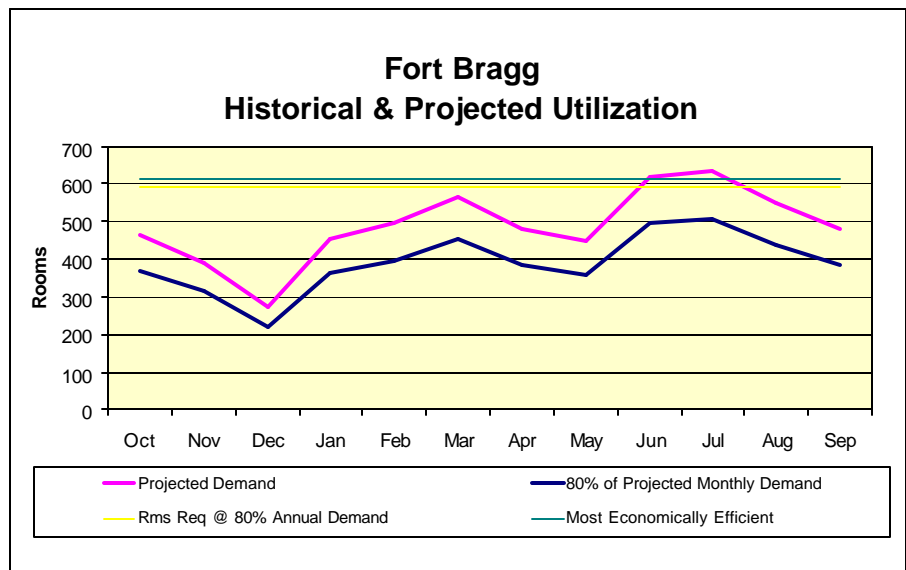
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Although 2002 data are shown in this report, their exceptional nature skews the results when averaged into the other years. It is assumed that following mobilization and demobilization related to war in Iraq, Fort Bragg will stabilize and return to earlier rates. For this reason, we have based our comparative analyses on the more representative data from 1998 to 2001; however we have incorporated the 2002 data in our Right Sizing Demand Template.

Data in our analysis have been normalized. Normalization of demand is a process that eliminates the monthly demand peaks or valleys where official demand is 20% greater or 20% less than average demand for 2000 through 2002. Variances greater or less than 20% of a three-year average are atypical and not likely to recur. Normalization had minimal effect on demand with less than two bed nights per day in 2001, none in 2002 or 1999 and less than 4 bed nights per day in 1998.

The objective of the Core Lodging Requirement is to provide sufficient lodging to meet 80% of the official demand. Using this criterion, the total number of rooms required on an annualized basis is 593, generating occupancy of 78%. This rate is well above the annual rates realized between 1998 and 2001 (1998-67.85%; 1999-63.44%; 2000-73.02% and 2001-70.17%). Except during times of exceptional mobilization, the post is very capable of handling its typical demand.

Another model that can be applied to determine the number of rooms to be provided at the installation is the "Most Economically Efficient" method. This method compares the cost of having a vacant room to the incremental cost of lodging personnel off post. When the costs of these scenarios are at equilibrium, the most cost efficient number of rooms will be provided from an operational cost perspective. The number of rooms required to achieve this equilibrium at Fort Bragg is 612 rooms. The chart below compares the pertinent potential alternatives to room inventory to the projected demand.



Source: Fort Bragg Lodging Administration and 3D/I

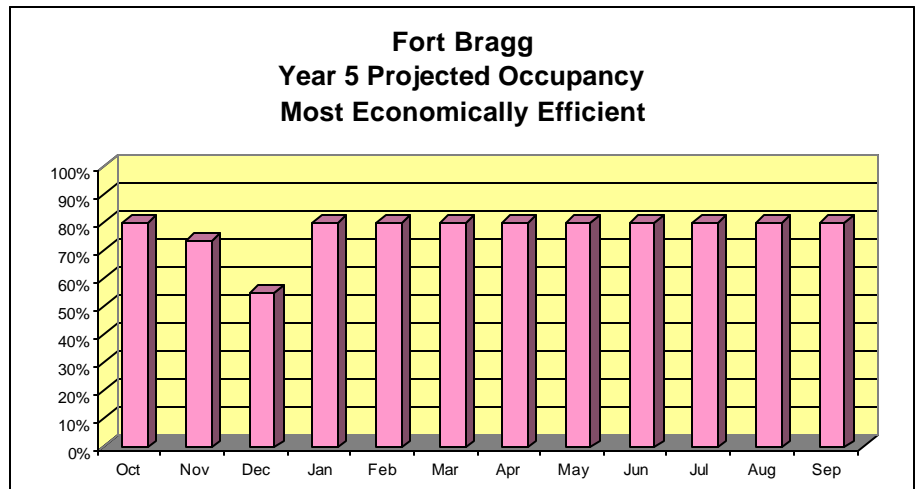
There are several factors that suggest the “Most Economically Efficient” number of 612 is the model to utilize. Using the “Most Economically Efficient” number would result in meeting 77% of the official demand, a rate closest of all models to the 1998 to 2001 average occupancy of 68.6% while meeting 83% of Official Demand. This will also reduce off post lodging costs in a market with limited quality lodging options while helping maintain current ADR with an on post estimated rate of \$48.75 in FY 08 dollars.

During the peak summer months when projected demand averages between 670 and 705 daily room nights, the Most Economically Efficient number will assist during the competitive time of summer travel in the private sector.

Also, as mentioned before, while there is sufficient quantity of rooms off post, there may not be sufficient quality. This is especially true because the demographics show the majority of the lodgers are TDY personnel who require a long stay. There are also the lodging needs of adjacent Pope Air Force Base to consider, many of which will mirror the needs of Fort Bragg at peak times of activity. Again, this is likely to continue at least through 2003 due to demobilization of personnel from Iraq. It is for these reasons that we are recommending the 612 rooms indicated by the “Most Economically Efficient.” criterion

The chart below presents the expected occupancy percentage on a monthly basis.





Source: 3D/I

Using “Most Economically Efficient” criterion, the average occupancy is 77% and 83% of the official demand is met. On a monthly basis, occupancy has a variance from a low of 55% in December to 80% in January through October. The graph below presents the expected occupancy percentage on a monthly basis.

## Summary and Recommendation

- Fort Bragg is a large, active installation. Pope Air Force base is also in the same market area
- There is a 2.7% population growth expected in the next five years
- The majority of personnel require lodging stays of more than 14 days
- At this installation, there are 682 lodging rooms in seven primary buildings
- Barracks are undergoing renovation and this displaces personnel into off-post lodging
- There is minimal but predictable seasonality that influences demand
- The private market has sufficient capacity to support the overflow lodging requirements that Fort Bragg personnel might encounter
- The existing demand justifies providing a room inventory at a rate lower than the current number of existing rooms, but higher than “80% of Demand”

- Based upon the demand pattern and expected growth, we recommend the number of rooms sized using the “Most Economically Efficient” criterion.

***Room Count and Mix Recommendation***

- 612 total rooms
- Room mix:
  - 371 standard guest rooms
  - 195 extended-stay guest rooms offering a kitchenette
  - 46 extended-stay family suites offering a separate bedroom, sitting/living area, and kitchenette

### Section 4 Facility Assessment and Plans

Each Lodging facility on-post is detailed in this section of the report. The outline of the detail is described below:

- **Summary of Existing Lodging Facility**
- **Significant Assumptions**, identifies criteria used for renovation / replacement cost models.
- **Cost Analysis**, summarizes recommendation based on cost.
- **Attributes**, describes number of rooms and configuration.
- **Condition Analysis and Recommendations** for each of the major systems of the building.
- **Major Functional Criteria Deficit**, describes any major Functional inadequacy based on Army standards.
- **Condition Assessment / Renovation / Replacement Analysis**
  - **Condition Assessment**, summarizes building system deficiencies grouped by CSI with additional hard cost and soft cost.
  - **Renovation**, summarizes building system costs plus functional renovation costs grouped by CSI with additional hard cost and soft cost.
  - **Replacement**, summarizes replacement cost grouped by CSI with additional hard cost and soft cost.



*Building 1-1939 (Forrestal Hall).*

## Building 1-1939

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Building 1-1939 (Forrestal Hall) was constructed in 1968. The 23,515 square foot facility contains 40 lodging units, 36 standard stay rooms and 4 one-bedroom suites. One standard stay room has been diverted for housekeeping. The building is functioning as 39 extended stay rooms.

### Significant Assumptions

The replacement and renovation cost models are based on 35 standard stay rooms and 4 family suites.

The renovation plan, if required, would use the existing foot print with the plan reworked to meet current lodging size requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix

All costs are adjusted by the Area Cost Factor of 88% for Fort Bragg, North Carolina.

### Cost Analysis

Condition Assessment Cost	\$1,508,535.00
Replacement Cost	\$2,897,230.00
Condition Assessment to Replacement Cost Ratio	52.07%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building 1-1939 is not recommended.

## Attributes

01.Number of Units Constructed	40
02.Number of Units Used	39
03.Back of House Function	No
04.Single Room w/o FullKitchen	35
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	4
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	39
12.Operating as Family Suite	0
13.Renovated to Standard	35
14.Renovated to Extended Stay	0
15.Renovated to Family Suite	4
16.Delta renovation	0

## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: Guest Rooms: The hard goods consist of a headboard, two nightstands, and dresser in each bedroom, an easy chair, TV, desk and floor lamps, and a micro fridge with microwave. All are in good condition. Soft goods consist of drapes on the windows, mattress and box springs, and bed coverings. All are in currently in good condition. The suites also have a couch and coffee table.
- Recommendation: Replace all hard and soft goods in guest rooms when their condition becomes poor.

### **Foundations**

#### **Standard Foundations**

- Analysis: The foundation is composed of a below grade continuous concrete footing that supports the perimeter and center load-bearing CMU walls. No clear failures can be seen from the perimeter. Foundation is in good condition.
- Recommendation: No corrective action required.

#### **Slab on Grade**

- Analysis: The concrete slab on grade is in good condition.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The structure is reinforced CMU load bearing walls. The second floor is a cast-in-place slab with integrated concrete beams. The floor structure is in good condition.
- Recommendation: No corrective action required.

#### **Roof Construction**

- Analysis: The structure is reinforced CMU load bearing walls. The roof is a slightly sloped structure composed of open-web steel joists. The roof superstructure is in good condition.
- Recommendation: No corrective action required.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: The exterior walls on the lodging building are brick veneer in good condition. The exterior walls of the separate mechanical building are also brick veneer but are cracking and disintegrating. These walls are in poor condition.
- Recommendation: Replace the brick veneer on the mechanical building.

#### **Exterior Windows**

- Analysis: The window in the unit is included in a storefront structure with built in door. This is aluminum-framed, double-glazed. These were replaced in 1998 but do not meet the ATFP standards. The windows are in good condition.
- Recommendation: No corrective action required but if the building were to be remodeled, the windows could be retrofitted to the ATFP standards.

#### **Exterior Doors**

- Analysis: The building has commercial grade metal door with aluminum frames and electronic locks. The doors are in good condition.
- Recommendation: No corrective action required.

#### **Roofing**

##### **Roof Coverings**

- Analysis: The roof is a slightly sloped built-up roof with ballast. There are no gutters. This roof was replaced in 1996 and is in good condition. The mechanical building is a flat roof with single-ply membrane roof in good condition.
- Recommendation: Install gutters and downspouts.

#### **Interior Construction**

##### **Partitions**

- Analysis: Partitions are a mixture of drywall on metal studs and plaster on CMU walls. Both types are in good condition.
- Recommendation: No corrective action required.

##### **Interior Doors**

- Analysis: The building has solid core wood doors in metal frames. The closet door is a wood bi-fold type. The doors are in good condition.
- Recommendation: No corrective action required.

##### **Fittings**

- Analysis: There are no public restrooms available in this building.
- Recommendation: No corrective action required.

#### **Stairs**

##### **Stair Construction**

- Analysis: Stairs are concrete with steel nosing. There are no elevators in the structure. The stairs are in good condition. The stair and balcony railings are aluminum and are in good condition.
- Recommendation: No corrective action required.

#### **Interior Finishes**

##### **Wall Finishes**

- Analysis: Wall finishes are a combination of DURAPLEX wall covering and painted drywall in the in the living area. The bathroom has a ceramic tile wainscot and painted drywall. The DURAPLEX wall covering and the ceramic tile finishes are in good condition. The painted drywall is in fair condition.

- Recommendation: Recover walls with vinyl wall coverings where existing and install new wall covering over painted surface.

#### **Floor Finishes**

- Analysis: The units have carpet, the bathrooms have ceramic tile, and the hospitality areas have VCT. All are in good condition.

- Recommendation: Replace carpet when its condition becomes poor and the ceramic tile if the plumbing is replaced. Replace the VCT with ceramic tile when its condition becomes poor.

#### **Ceiling Finishes**

- Analysis: Ceiling in the 1st floor living area is acoustical ceiling tile. Ceiling in the 2nd floor living area is painted drywall. The bathroom has a vinyl coated ceiling tile. All ceilings are in good condition.

- Recommendation: Repaint ceilings in living area. Replace acoustical ceiling tile with painted drywall.

### **Plumbing**

#### **Plumbing Fixtures**

- Analysis: Each unit has an individual restroom containing a lavatory and vanity; a water closet and a built in place shower. Both are in fair condition. Ventilation is a constant volume induced draft system but the grill is not located in the rest room. The plumbing fixtures are in good condition.

- Recommendation: Replace entire plumbing system including fixtures.

#### **Domestic Water Distribution**

- Analysis: Hot water is produced from a gas-fired boiler. There was no storage tank - the hot water tank mount was empty and there was no indication of an internal tank in the boiler. The boiler was replaced in 1997 and is in good condition but there are still hot water shortages. The circulating pumps are in good condition. Most mechanical room piping has been replaced but the building system piping is original and is considered to be in poor condition.

- Recommendation: Install a hot water storage tank to supplement the existing boiler.

### **HVAC**

#### **Cooling Generating Systems**

- Analysis: The mechanical system is a multiple-pipe fan-coil hydronic system with 3-way valves that allows simultaneous heating and cooling. The hot water for heating is supplied by two hot water boilers located in the mechanical room. The chiller is located in an equipment yard adjacent to the mechanical room. This system was replaced in 1998 and is in good condition. Housekeeping rooms are not conditioned.

- Recommendation: Install PTACs in housekeeping rooms.

## **Fire Protection**

### **Sprinklers**

- Analysis: This building did not contain a sprinkler system.
- Recommendation: Install new sprinkler system.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: Electrical service is supplied to the building through an underground service into the mechanical room. Secondary service is 120/208Y volt 800 amp main disconnect. Distribution panels are located in the mechanical room and throughout the building to provide power for lighting and receptacles. The electrical service is original and in poor condition. Incandescent lighting was replaced in 1998 and is in good condition. One fixture includes a ceiling fan with light. Outlets in the units are insufficient but in good condition.
- Recommendation: Replace main service and panel to handle increased electrical loads. Replace branch circuits, electrical outlets and lighting.

### **Communications and Security**

- Analysis: The fire alarm system consists of hard-wired heat detectors and smoke detectors located in each room. The system does not have a connection to the fire department. Because of this, it is considered to be in poor condition.
- Recommendation: Install annunciator panel, connect to fire department, and install strobes.

## **Equipment**

### **Other Equipment**

- Analysis: These guest rooms contain a "hospitality" area, which includes base and wall cabinets, counter space, a sink, micro-fridge, and a microwave but no stovetop burners. All are in good condition.
- Recommendation: No corrective action required.

## **Site Preparation**

### **Site Earthwork**

- Analysis: The site consists of grass covered yard areas and shared parking lots with access to main roads. The site is graded properly to allow for drainage. The site is in good condition.
- Recommendation: No corrective action required.

## **Major Functional Criteria**

### **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**



Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in building 3601, and are not included in this building.

- **Public Spaces**

Most of the public spaces are required at the main lodging building on post. Presently these are located in building 3601, and are not included in this building.

- **Standard Guest Room**

Room size and configuration: The rooms meet the majority of the requirements.

Renovation Recommendation: Do not recommend adding to this building, because of condition assessment cost is already over the 50% of replacement cost.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>04 Masonry</b>	<b>3.32%</b>	<b>\$29,721.48</b>
Face Brick - Damaged or Failing		\$29,721.48
<b>07 Thermal &amp; Moisture Protection</b>	<b>0.69%</b>	<b>\$6,148.61</b>
Control Joint Sealant: Damaged or Failing		\$315.61
Gutters: Missing or Inadequate		\$5,833.00
<b>09 Finishes</b>	<b>23.00%</b>	<b>\$206,025.12</b>
Carpet: Beyond Useful Life		\$25,503.71
Drywall Ceilings: Damaged or Failing		\$25,939.58
Floor Tile: Damaged or Failing		\$7,717.99
Grout: Damaged or Failing		\$3,345.41
Interior ceilings: Paint Failing		\$2,495.27
Vinyl Wall Covering: Beyond expected useful life		\$62,667.96
Wall Tile: Damaged or Failing		\$78,355.20
<b>13 Special Construction</b>	<b>9.20%</b>	<b>\$82,362.96</b>
Fire Alarm System: Missing or Inadequate		\$16,150.00
Fire Sprinklers: Missing or Inadequate		\$66,212.96
<b>15 Mechanical</b>	<b>25.98%</b>	<b>\$232,713.34</b>
Domestic water system: Beyond expected useful life		\$38,592.95
Hot water storage tank: Damaged or failing		\$4,173.40
Pipe, sewer or waste: Beyond expected useful life		\$18,517.97
PTAC: Missing or inadequate		\$3,106.75
Restroom exhaust: Damaged or failing		\$50,462.11
Sink & vanity: Replace due to remodel		\$27,199.04
Tub: Beyond expected useful life		\$55,781.44
Water closet: Beyond expected useful life		\$34,879.68
<b>16 Electrical</b>	<b>16.04%</b>	<b>\$143,676.46</b>
Branch Circuits: Beyond Expected Useful Life		\$52,459.00
Fixture: Incandescent fixture beyond expected life		\$69,388.00
Fixtures, fluorescent: Beyond expected useful life		\$1,307.86
Main service: Beyond expected useful life		\$20,521.60
<b>19 FF&amp;E</b>	<b>21.77%</b>	<b>\$195,000.00</b>
Hard and soft goods: Beyond expected useful life		\$195,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$895,648.00</b>

#### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$4,926.06
Force Protection	9.00%	\$89,112.50
General Conditions	10.00%	\$89,564.80
<b>Total Additional Hard Cost</b>		<b>\$183,603.36</b>

**Soft Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	10.00%	\$107,925.14
SIOH Conus	6.50%	\$77,166.47
Design	10.00%	\$107,925.14
08 MYr Inflation Fct	9.93%	\$136,266.22
<b>Total Soft Cost</b>		<b>\$429,282.97</b>
<b>Total Project</b>		<b>\$1,508,534.33</b>

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>2.81%</b>	<b>\$55,037.84</b>
Site Earthwork		\$55,037.84
<b>03 Concrete</b>	<b>15.88%</b>	<b>\$310,738.31</b>
Floor Construction		\$182,117.51
Slab on Grade		\$40,717.60
Stair Construction		\$6,468.00
Standard Foundations		\$81,435.20
<b>04 Masonry</b>	<b>5.60%</b>	<b>\$109,626.01</b>
Exterior Walls		\$109,626.01
<b>07 Thermal &amp; Moisture Protection</b>	<b>7.46%</b>	<b>\$145,934.81</b>
Roof Construction		\$45,571.09
Roof Coverings		\$100,363.72
<b>08 Doors &amp; Windows</b>	<b>9.95%</b>	<b>\$194,616.40</b>
Exterior Doors		\$8,646.00
Exterior Windows		\$151,360.00
Interior Doors		\$34,610.40
<b>09 Finishes</b>	<b>14.72%</b>	<b>\$288,026.34</b>
Ceiling Finishes		\$44,969.97
Floor Finishes		\$105,688.50
Partitions		\$76,964.74
Wall Finishes		\$60,403.13
<b>10 Specialties</b>	<b>0.07%</b>	<b>\$1,327.04</b>
Fittings		\$1,327.04
<b>11 Equipment</b>	<b>0.63%</b>	<b>\$12,320.00</b>
Other Equipment		\$12,320.00
<b>13 Special Construction</b>	<b>5.01%</b>	<b>\$98,047.98</b>
Communications & Security		\$44,137.88
Sprinklers		\$53,910.10
<b>15 Mechanical</b>	<b>20.66%</b>	<b>\$404,306.32</b>
Cooling Generating Systems		\$130,296.32
Domestic Water Dist		\$64,944.00
Plumbing Fixtures		\$209,066.00
<b>16 Electrical</b>	<b>7.25%</b>	<b>\$141,933.44</b>
Electrical Service & Distribution		\$141,933.44
<b>19 FF&amp;E</b>	<b>9.96%</b>	<b>\$195,000.00</b>
Interior FF&E allowance		\$195,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$1,956,914.49</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$10,763.03
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$195,691.45

<b>Total Additional Hard Cost</b>	<b>\$206,454.48</b>
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**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$108,168.45
SIOH Conus	6.50%	\$147,649.93
Design	10.00%	\$216,336.90
08 MYr Inflation Fct	9.93%	\$261,707.56
<b>Total Soft Cost</b>		<b>\$733,862.83</b>
<b>Total Project Cost for Replacement</b>		<b>\$2,897,231.80</b>

**INSERT BUILDING 11939 FLOOR PLANS HERE**



Building 1-4425 (Sink House).

## Building 1-4425

Building 1-4425 (the Sink House) was constructed in 1931. The 4,134 square foot facility is a former residential unit used as a DVQ and contains 3 lodging units: 2 bedrooms with adjoining bathrooms and a third bedroom with access to a bathroom., a full kitchen, dining and living room. The building is functioning as 3 standard stay rooms but generally only has one occupant. This unit is not on the historic register.

### Significant Assumptions

The replacement and renovation cost models are based on 2 standard stay rooms and 2 family suites.

The renovation plan if required, would use the existing foot print with the plan reworked to meet current lodging size requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix

All costs are adjusted by the Area Cost Factor of 88% for Fort Bragg, North Carolina.

### Cost Analysis

Condition Assessment Cost	\$282,750.00
Replacement Cost	\$291,180.00
Condition Assessment to Replacement Cost Ratio	97.10%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building 1-4425 is not recommended.

## Attributes

01.Number of Units Constructed	3
02.Number of Units Used	3
03.Back of House Function	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	3
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	1
13.Renovated to Standard	2
14.Renovated to Extended Stay	0
15.Renovated to Family Suite	2
16.Delta renovation	1

## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: Analysis: Guest Rooms: The hard goods consist of a headboard, night stand, dresser in each bedroom; a couch, easy chair, coffee table, end table, desk and entertainment shelf unit in the living rooms; a formal dinette set in the kitchen; and a breakfast table with chairs in the kitchen. Rooms also contain a curio cabinet and various desks. All are in good condition. Soft goods consist of drapes and blinds on the windows, TV, mattress and box springs and bed coverings. All are in good condition.
- Recommendation: Replace all hard and soft goods in guest rooms when they are in poor condition.

### **Foundations**

#### **Standard Foundations**

- Analysis: The foundation consists of a concrete basement with supporting I-beams for most of the structure while a concrete perimeter beam supports the sun room area over a crawl space. The foundation is in good condition.
- Recommendation: No corrective action required.

#### **Slab on Grade**

- Analysis: There is no slab on grade sections in this building's foundation.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The first floor is a wood joist system supported by concrete walls and steel columns. The substructure is in good condition.
- Recommendation: No corrective action required.

#### **Roof Construction**

- Analysis: The structure uses a masonry frame with wood joists and subfloor for the second floor. The steeply pitched roof is a wood truss with 1x decking. The superstructure is in good condition.
- Recommendation: No corrective action required.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: The exterior walls are a stucco finish in good condition.
- Recommendation: No corrective action required.

#### **Exterior Windows**



- Analysis: The windows are wood, single-glazed, single hung windows. The basement windows are single-glazed sliders. Windows are in fair condition. Basement windows are in poor condition.

- Recommendation: Replace windows.

#### **Exterior Doors**

- Analysis: The building has solid wood doors with wood frames and keyed locks. The front door is in good condition but the rear door, with glazing, is in fair condition. The unit also has a basement garage door and a basement hatch which both are in good condition.

- Recommendation: Replace the rear door, frame and lockset.

#### **Roofing**

##### **Roof Coverings**

- Analysis: The steeply sloped roof has clay tiles in good condition. The gutters and downspouts are in good condition.

- Recommendation: No corrective action required.

#### **Interior Construction**

##### **Partitions**

- Analysis: Partitions are a mixture of plaster on wood studs and plaster on masonry walls. Both types are in good condition.

- Recommendation: No corrective action required.

##### **Interior Doors**

- Analysis: The building has solid core wood doors in wood frames. All the interior doors are in fair condition.

- Recommendation: Refinish doors and replace hardware.

#### **Interior Finishes**

##### **Wall Finishes**

- Analysis: Most rooms have a painted plaster finish; the kitchen has vinyl wall covering. The bathrooms have ceramic tile wainscot and vinyl wall covering. All finishes are in good condition.

- Recommendation: Recover walls with vinyl wall coverings where existing and install new wall covering over painted surface. Replace the ceramic tile wainscot with full height ceramic tile wall at the end of its useful life.

##### **Floor Finishes**

- Analysis: The floor finishes are carpet, sheet vinyl in the kitchen and bathrooms, and painted/unpainted concrete in the basement. All are in good condition.

- Recommendation: Replace carpet when its condition becomes poor. Replace the sheet vinyl with ceramic tile when its condition becomes poor. Install quarry tile and ceramic tile in the basement laundry and linen room.

##### **Ceiling Finishes**

- Analysis: Ceilings on the first and second floors are painted and in fair condition. The ceilings in the basement are primarily open wood joists.

- Recommendation: Repaint existing painted ceilings in living area. Install painted drywall ceiling in basement laundry and linen areas.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: This unit contains four full bathrooms. Bathrooms contained a vanity containing lavatory/cultured marble countertop or a wall mounted lavatory, a water closet, and an enameled cast-iron tub/shower. The plumbing fixtures appear to be in good condition. The exhaust ventilation is a switched system and is in good condition. The bathrooms fixtures have been updated but the plumbing lines are original.
- Recommendation: Replace entire plumbing system including fixtures.

### **Domestic Water Distribution**

- Analysis: Hot water is produced from an estimated 80-gallon gas residential type water heater. The boiler was replaced in 1992 and is in good condition. The building system piping is in good condition but may be nearing the end of its life cycle.
- Recommendation: Replace the domestic water system piping.

## **HVAC**

### **Cooling Generating Systems**

- Analysis: The mechanical system consists of two split-systems using heat pumps. One system is located in the basement; the other is located in the attic. This system is believed to have been replaced in 1982 but because of numerous repair calls, the system is considered to be in poor condition.
- Recommendation: Replace split system HVAC.

## **Fire Protection**

### **Sprinklers**

- Analysis: This building did not contain a sprinkler system.
- Recommendation: Install new sprinkler system.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: Electrical service is supplied to the building from an overhead pole-mounted transformer bank. Secondary service is 120/208Y volt 400 amp main disconnect. Additional distribution panels have been added over the years. The electrical service is in fair condition. Lighting is incandescent and is in good condition. Outlets in the units are insufficient but in good condition.
- Recommendation: Replace main service and panel to handle increased electrical loads and consolidate panels. Replace branch circuits, electrical outlets and lighting.

### **Communications and Security**

- Analysis: The fire alarm system consists of hard-wired heat detectors and smoke detector located in each room. The system has an annunciator panel and appears to be connected to the fire department. The system is in good condition. There are no exit signs or emergency lights located inside this facility.
- Recommendation: No corrective action required.

## **Equipment**

### **Other Equipment**

- Analysis: This facility contains a full kitchen with two wall ovens, a free-standing stove, base and wall cabinets, sink, and other amenities.
- Recommendation: No corrective action required.

## **Site Preparation**

### **Site Earthwork**

- Analysis: The site consists of grass covered yard areas, numerous trees and shrubs, and private driveway off a residential street. The site is graded properly to allow for drainage and has foundation plantings. The site is in good condition. The concrete driveway leading to the basement garage is in good condition. The building does not have adequate parking for all guests but additional parking is available on the side streets. The site lighting is in good condition and includes accent lighting in the foundation plantings.
- Recommendation: No corrective action required.

## **Major Functional Criteria**

### **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**  
Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in building 3601, and are not included in this building.
- **Public Spaces**  
Most of the public spaces are required at the main lodging building on post. Presently these are located in building 3601, and are not included in this building.
- **Standard Guest Room**  
Room Size and Configuration: The rooms exceed size and configuration requirements.  
Renovation Recommendation: Do not recommend adding to this building, because of condition assessment cost is already over the 50% of replacement cost.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>06 Wood &amp; Plastics</b>	<b>1.94%</b>	<b>\$3,263.29</b>
Wood Floor Base: Damaged		\$3,263.29
<b>08 Doors &amp; Windows</b>	<b>17.55%</b>	<b>\$29,456.34</b>
Scratched and marred		\$9,664.16
Wd. Casement - Beyond Useful Life		\$750.40
Wood Door - Damaged or Failing		\$758.91
Wood Framed windows: Damaged or failing		\$18,282.87
<b>09 Finishes</b>	<b>21.01%</b>	<b>\$35,269.72</b>
Carpet: Beyond Useful Life		\$4,628.06
Drywall Ceilings: Damaged or Failing		\$1,548.36
Floor Tile: Damaged or Failing		\$4,387.90
Interior ceilings: Paint Failing		\$1,285.54
Interior walls: Paint failing		\$751.28
Quarry Floor Tile: Damaged or Failing		\$1,865.00
Vinyl Wall Covering: Beyond expected useful life		\$11,929.85
Wall Tile: Damaged or Failing		\$8,873.73
<b>13 Special Construction</b>	<b>8.59%</b>	<b>\$14,418.84</b>
Fire Sprinklers: Missing or Inadequate		\$14,418.84
<b>15 Mechanical</b>	<b>17.06%</b>	<b>\$28,632.07</b>
Heat pump: Damaged and failing		\$4,419.53
Pipe, domestic water: Beyond expected useful life		\$8,398.36
Pipe, sewer or waste: Beyond expected useful life		\$4,028.17
Sink & vanity: Replace due to remodel		\$2,719.90
Tub: Beyond expected useful life		\$5,578.14
Water closet: Beyond expected useful life		\$3,487.97
<b>16 Electrical</b>	<b>24.92%</b>	<b>\$41,833.49</b>
Branch Circuits: Beyond Expected Useful Life		\$11,412.63
Fixture: Incandescent fixture beyond expected life		\$15,095.66
Main service: Beyond expected useful life		\$15,325.20
<b>19 FF&amp;E</b>	<b>8.94%</b>	<b>\$15,000.00</b>
Hard and soft goods: Beyond expected useful life		\$15,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$167,874.00</b>

#### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$923.31
Force Protection	9.00%	\$16,702.62
General Conditions	10.00%	\$16,787.40
<b>Total Additional Hard Cost</b>		<b>\$34,413.33</b>

#### Soft Cost (Template: Army Lodging Renovation)

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	10.00%	\$20,228.73
SIOH Conus	6.50%	\$14,463.54
Design	10.00%	\$20,228.73
08 MYr Inflation Fct	9.93%	\$25,540.79
<b>Total Soft Cost</b>		<b>\$80,461.80</b>
<b>Total Project</b>		<b>\$282,749.13</b>

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>5.52%</b>	<b>\$10,851.50</b>
Site Earthwork		\$10,851.50
<b>03 Concrete</b>	<b>10.67%</b>	<b>\$20,980.63</b>
Floor Construction		\$9,057.36
Slab on Grade		\$4,966.87
Standard Foundations		\$6,956.40
<b>04 Masonry</b>	<b>11.89%</b>	<b>\$23,391.82</b>
Exterior Walls		\$23,391.82
<b>07 Thermal &amp; Moisture Protection</b>	<b>3.15%</b>	<b>\$6,199.76</b>
Roof Construction		\$2,702.52
Roof Coverings		\$3,497.25
<b>08 Doors &amp; Windows</b>	<b>13.30%</b>	<b>\$26,150.96</b>
Exterior Doors		\$3,814.80
Exterior Windows		\$17,600.00
Interior Doors		\$4,736.16
<b>09 Finishes</b>	<b>16.01%</b>	<b>\$31,478.17</b>
Ceiling Finishes		\$4,075.50
Floor Finishes		\$11,064.99
Partitions		\$9,838.84
Wall Finishes		\$6,498.84
<b>11 Equipment</b>	<b>6.26%</b>	<b>\$12,320.00</b>
Other Equipment		\$12,320.00
<b>13 Special Construction</b>	<b>3.61%</b>	<b>\$7,109.44</b>
Communications & Security		\$2,504.30
Sprinklers		\$4,605.14
<b>15 Mechanical</b>	<b>13.58%</b>	<b>\$26,706.24</b>
Cooling Generating Systems		\$11,130.24
Domestic Water Dist		\$5,280.00
Plumbing Fixtures		\$10,296.00
<b>16 Electrical</b>	<b>5.84%</b>	<b>\$11,485.76</b>
Electrical Service & Distribution		\$11,485.76
<b>19 FF&amp;E</b>	<b>10.17%</b>	<b>\$20,000.00</b>
Interior FF&E allowance		\$20,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$196,674.28</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$1,081.71
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$19,667.43
<b>Total Additional Hard Cost</b>		<b>\$20,749.14</b>

### Soft Cost (Template: Army Lodging New Construction)

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$10,871.17
SIOH Conus	6.50%	\$14,839.15
Design	10.00%	\$21,742.34
08 MYr Inflation Fct	9.93%	\$26,302.19
<b>Total Soft Cost</b>		<b>\$73,754.85</b>
<b>Total Project Cost for Replacement</b>		<b>\$291,178.27</b>

**INSERT BUILDING 14425 FLOOR PLANS HERE**





Building 1-4428 (Normandy House).

## Building 1-4428

Building 1-4428 (Normandy Guest House) was constructed in 1935 and is on the historical register. The 17,316 square foot facility contains 20 lodging units: 1 suite with a kitchenette, 17 two-room suites, and 2 standard stay rooms. The building is functioning as 8 standard stay rooms and 12 family suites.

### Significant Assumptions

The replacement and renovation cost models are based on 13 extended stay rooms and 9 family suites.

The renovation plan if required, would use the existing foot print with the plan reworked to meet current lodging size requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.

All costs are adjusted by the Area Cost Factor of 88% for Fort Bragg, North Carolina.

### Cost Analysis

Condition Assessment Cost	\$1,518,995.00
Replacement Cost	\$2,048,735.00
Condition Assessment to Replacement Cost Ratio	74.14%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building 1-4428 is not recommended.

## Attributes

01.Number of Units Constructed	20
02.Number of Units Used	20
03.Back of House Function	No
04.Single Room w/o FullKitchen	2
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	17
07.Multi Room w/ Full Kitchen	1
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	2
11.Operating as Extended Stay	18
12.Operating as Family Suite	0
13.Renovated to Standard	0
14.Renovated to Extended Stay	13
15.Renovated to Family Suite	9
16.Delta renovation	2

## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: Guest Rooms: The typical room hard goods consist of a headboard, a nightstand, an entertainment armoire, a desk/table with chair, easy chair and a TV. Soft goods consist of drapes on the windows, mattress and box springs, and bed coverings. All are in currently in good condition.
- Recommendation: Replace all hard and soft goods in guest rooms when their condition becomes poor.

### **Foundations**

#### **Standard Foundations**

- Analysis: Foundation is composed of concrete perimeter beam and piers on poured concrete footings on compacted soil. The center of the building contains a basement with concrete and CMU walls. No clear failures can be seen from perimeter. Foundation is in good condition.
- Recommendation: No corrective action required.

#### **Slab on Grade**

- Analysis: There are no slab on grade sections in this building's foundation.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The floors are constructed using supported, integrated masonry floor system supported by concrete columns and beams. A wood sub-floor appears to overlay the concrete. The floor structure is in good condition.
- Recommendation: No corrective action required.

#### **Roof Construction**

- Analysis: The structure is a wood frame truss construction with wood support posts. The attic area contains insulation and fire walls. The superstructure is in good condition.
- Recommendation: No corrective action required.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: The exterior walls are a stucco finish and are in good condition.
- Recommendation: No corrective action required.

#### **Exterior Windows**

- Analysis: The windows are aluminum, double-glazed, and single hung and are in fair condition. Although appearance seems good, there have been numerous service calls for window repairs.

- Recommendation: Replace windows.

#### **Exterior Doors**

- Analysis: The front entrance doors at the lobby are glazed swing doors and are in good condition. Other exterior doors are commercial grade metal with metal frames and are in good condition.
- Recommendation: Replace door when their condition becomes poor.

#### **Roofing**

##### **Roof Coverings**

- Analysis: The sloped roof has clay tiles in fair condition. There have been numerous service calls for roof leaks. The gutters and downspouts are in good condition.
- Recommendation: Replace the clay roof tiles. Replace gutters and downspouts when their condition becomes poor.

#### **Interior Construction**

##### **Partitions**

- Analysis: The partitions are plaster on masonry walls and are in good condition.
- Recommendation: No corrective action required.

##### **Interior Doors**

- Analysis: The solid core wood doors are in fair condition. The room entrance doors do not appear to be fire-rated. The entrance doors have keyless locksets.
- Recommendation: Replace entrance door and frame to 1-hour fire rated door. Refinish other wood doors.

##### **Fittings**

- Analysis: The small public restrooms located near the lobby do not contain nor need toilet partitions.
- Recommendation: No corrective action required.

#### **Stairs**

##### **Stair Construction**

- Analysis: The interior stairs are concrete with marble treads and risers. The decorative railing is metal and wood. All are in good condition.
- Recommendation: No corrective action required.

#### **Interior Finishes**

##### **Wall Finishes**

- Analysis: A combination of vinyl wall covering and painted plaster finishes are in the living area. The bathroom has ceramic tile wainscot and vinyl wall covering. The finishes are in fair condition.
- Recommendation: Recover walls with vinyl wall coverings. Replace the ceramic tile wainscot with full height ceramic wall tile when the plumbing is renovated.

##### **Floor Finishes**

- Analysis: The units have carpet and the bathrooms have ceramic tile. All are in good condition.
- Recommendation: Replace carpet when its condition becomes poor and the ceramic tile if the plumbing is replaced.

#### **Ceiling Finishes**

- Analysis: Ceilings in the living areas are acoustical ceiling tile. The bathroom ceilings are painted plaster or drywall. These ceiling finishes are in good condition.
- Recommendation: Replace acoustical ceiling tile in rooms with painted drywall when the ceiling tile condition becomes poor. Repaint the ceilings in bathrooms.

### **Plumbing**

#### **Plumbing Fixtures**

- Analysis: All units have an individual bathroom containing a porcelain pedestal sink, tank-type toilet, and a built-in shower unit. One unit has a tub instead of a shower. Exhaust ventilation is an individual switched unit. The plumbing fixtures are in good condition although there have been numerous service calls for minor repairs. The exhaust ventilation is in good condition. The plumbing lines are original and are considered to be in fair condition.
- Recommendation: Replace the entire plumbing system including fixtures.

#### **Domestic Water Distribution**

- Analysis: Hot water is produced from a 98-gallon gas-fired boiler with accompanying 200 plus gallon tank. The boiler and circulating pump is in good condition but the accompanying tank is in fair condition. The system was upgraded in 1993.
- Recommendation: Replace the domestic water system piping and replace the hot water tank.

### **HVAC**

#### **Cooling Generating Systems**

- Analysis: The mechanical system is a two-pipe fan-coil hydronic hot water heating system and chilled water system with one thermostat to control the entire building. An oil-fired boiler supplies hot water and an air-cooled chiller located behind the building provides chilled water. The fan-coil units are in poor condition. The boiler and chiller are in good condition. An air handler system provides tempered/dehumidified air to the rooms and common areas.
- Recommendation: Replace existing fan-coil mechanical system with a system of PTAC units in each living area. Revise boiler/chiller system so that air handling unit can continue to provide air to common areas.

### **Fire Protection**

#### **Sprinklers**

- Analysis: This building did not contain a sprinkler system.
- Recommendation: Install new sprinkler system.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: Electrical service is supplied to the basement mechanical/electrical room. Secondary service is 120/208Y volt 600 amp main disconnect. Additional distribution panels have been added over the years. The electrical service is in fair condition. Lighting is incandescent and is in good condition. Outlets in the units are sufficient and in good condition.
- Recommendation: Replace main service and panel to handle increased electrical loads and consolidate panels. Replace branch circuits, electrical outlets and lighting.

### **Communications and Security**

- Analysis: The fire alarm system consists of hard-wired heat detectors and smoke detector located in each room. The system has an annunciator panel and appears to be connected to the fire department. The system is in good condition.
- Recommendation: Replace fire alarm system when its condition becomes poor.

## **Equipment**

### **Other Equipment**

- Analysis: Only one suite contains a "hospitality" area, which includes base and wall cabinets, counter space, a sink, micro-fridge, and a microwave and stove top. All are in good condition. A full common kitchen is available in the vending area for the other guests. The kitchen cabinets are in poor condition.
- Recommendation: Replace the base and wall cabinets, countertop in the vending area.

## **Site Preparation**

### **Site Earthwork**

- Analysis: The site consists of grass covered yard areas and shared parking lots with access to main roads. The site is graded properly to allow for drainage. The site is in good condition. The asphalt parking area at the end of the building is in fair condition. The size is limited. Additional parking is available on the street and across the street. The concrete sidewalks to the rear of the building are cracked and uneven in areas. They are in poor condition.
- Recommendation: No corrective action required for site earthwork. Resurface the parking lot. Replace the sidewalks.

## **Major Functional Criteria**

### **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in building 3601, and are not included in this building

- **Public Spaces**

Most of the public spaces are required at the main lodging building on post. Presently these are located in building 3601, and are not included in this building.

- **Standard Guest Room**

Most of the public spaces are required at the main lodging building on post. Presently these are located in building 3601, and are not included in this building.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>0.17%</b>	<b>\$1,509.41</b>
Parking: AC Pavement Damaged or Failing		\$492.05
Walks: Concrete Walk Damaged or Failing		\$1,017.36
<b>06 Wood &amp; Plastics</b>	<b>0.38%</b>	<b>\$3,416.91</b>
Base Cabinets: Beyond Useful Life		\$1,461.55
Upper cabinets: Beyond expected useful life		\$1,955.36
<b>07 Thermal &amp; Moisture Protection</b>	<b>11.32%</b>	<b>\$102,075.27</b>
Gutters: Damaged or Failing		\$3,597.44
Tile Roof Beyond Usefull Life		\$98,477.83
<b>08 Doors &amp; Windows</b>	<b>14.32%</b>	<b>\$129,154.77</b>
Exterior Steel Door - Beyond expected useful life		\$3,602.28
Scratched and marred		\$28,509.27
Storefront - Beyond Useful Life		\$2,372.92
Wood Fire Doors: Missing or Inadequate		\$53,377.63
Wood Framed windows: Damaged or failing		\$41,292.67
<b>09 Finishes</b>	<b>18.45%</b>	<b>\$166,426.08</b>
Acoustical Ceiling Tile: Beyond expect useful life		\$2,141.08
Carpet: Beyond Useful Life		\$20,727.73
Drywall Ceilings: Damaged or Failing		\$26,668.24
Floor Tile: Damaged or Failing		\$11,136.23
Interior ceilings: Paint Failing		\$453.26
VCT: Beyond Useful Life		\$508.38
Vinyl Wall Covering: Beyond expected useful life		\$58,600.76
Wall Tile: Damaged or Failing		\$46,190.40
<b>13 Special Construction</b>	<b>8.13%</b>	<b>\$73,313.95</b>
Fire Alarm System: Missing or Inadequate		\$12,952.37
Fire Sprinklers: Missing or Inadequate		\$60,361.58
<b>15 Mechanical</b>	<b>20.28%</b>	<b>\$182,909.40</b>
Domestic water system: Beyond expected useful life		\$35,177.70
Hot water storage tank: Damaged or failing		\$2,944.70
Pipe, sewer or waste: Beyond expected useful life		\$16,877.58
PTAC: Missing or inadequate		\$63,688.42
Restroom exhaust: Damaged or failing		\$27,761.50
Sink & vanity: Replace due to remodel		\$14,959.47
Tub: Beyond expected useful life		\$1,394.54
Urinal: Beyond expected useful life		\$921.67
Water closet: Beyond expected useful life		\$19,183.82
<b>16 Electrical</b>	<b>15.86%</b>	<b>\$143,052.40</b>
Branch Circuits: Beyond Expected Useful Life		\$47,805.98
Emergency light: Beyond expected useful life		\$3,154.87
Exit Light: Beyond expected useful life		\$1,795.20
Fixture: Incandescent fixture beyond expected life		\$63,235.47
Fixtures, fluorescent: Beyond expected useful life		\$6,539.28

Main service: Beyond expected useful life		\$20,521.60
<b>19 FF&amp;E</b>	<b>11.09%</b>	<b>\$100,000.00</b>
Hard and soft goods: Beyond expected useful life		\$100,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$901,858.00</b>

**Additional Hard Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Spirit	0.50%	\$4,960.22
Force Protection	9.00%	\$89,730.36
General Conditions	10.00%	\$90,185.80
<b>Total Additional Hard Cost</b>		<b>\$184,876.38</b>

**Soft Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	10.00%	\$108,673.44
SIOH Conus	6.50%	\$77,701.51
Design	10.00%	\$108,673.44
08 MYr Inflation Fct	9.93%	\$137,211.03
<b>Total Soft Cost</b>		<b>\$432,259.41</b>
<b>Total Project</b>		<b>\$1,518,993.79</b>



## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>2.70%</b>	<b>\$37,324.76</b>
Site Earthwork		\$37,324.76
<b>03 Concrete</b>	<b>15.33%</b>	<b>\$212,086.12</b>
Floor Construction		\$122,827.72
Slab on Grade		\$27,596.80
Stair Construction		\$6,468.00
Standard Foundations		\$55,193.60
<b>04 Masonry</b>	<b>5.91%</b>	<b>\$81,754.99</b>
Exterior Walls		\$81,754.99
<b>07 Thermal &amp; Moisture Protection</b>	<b>7.19%</b>	<b>\$99,534.02</b>
Roof Construction		\$31,307.19
Roof Coverings		\$68,226.83
<b>08 Doors &amp; Windows</b>	<b>8.98%</b>	<b>\$124,211.12</b>
Exterior Doors		\$8,646.00
Exterior Windows		\$91,520.00
Interior Doors		\$24,045.12
<b>09 Finishes</b>	<b>13.76%</b>	<b>\$190,436.76</b>
Ceiling Finishes		\$30,050.33
Floor Finishes		\$62,826.82
Partitions		\$53,695.98
Wall Finishes		\$43,863.64
<b>10 Specialties</b>	<b>0.10%</b>	<b>\$1,327.04</b>
Fittings		\$1,327.04
<b>11 Equipment</b>	<b>4.90%</b>	<b>\$67,760.00</b>
Other Equipment		\$67,760.00
<b>13 Special Construction</b>	<b>4.80%</b>	<b>\$66,453.09</b>
Communications & Security		\$29,914.93
Sprinklers		\$36,538.16
<b>15 Mechanical</b>	<b>21.36%</b>	<b>\$295,593.76</b>
Cooling Generating Systems		\$88,309.76
Domestic Water Dist		\$41,976.00
Plumbing Fixtures		\$165,308.00
<b>16 Electrical</b>	<b>7.03%</b>	<b>\$97,322.72</b>
Electrical Service & Distribution		\$97,322.72
<b>19 FF&amp;E</b>	<b>7.95%</b>	<b>\$110,000.00</b>
Interior FF&E allowance		\$110,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$1,383,804.38</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$7,610.92
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$138,380.44

**Total Additional Hard Cost** **\$145,991.36**

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$76,489.79
SIOH Conus	6.50%	\$104,408.56
Design	10.00%	\$152,979.57
08 MYr Inflation Fct	9.93%	\$185,062.80
<b>Total Soft Cost</b>		<b>\$518,940.72</b>
<b>Total Project Cost for Replacement</b>		<b>\$2,048,736.46</b>

**INSERT BUILDING 14428 FLOOR PLANS HERE**



*Building 5-5047 (Leal Guest House).*

## Building 5-5047

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Building 5-5047 (Leal House) was constructed in 1969. The 12,557 square foot facility contains 24 lodging units. The building is functioning as 24 family suites.

### Significant Assumptions

The replacement and renovation cost models are based on 20 standardized stay rooms.

The renovation plan if required, would use the existing foot print with the plan reworked to meet current lodging size requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.

All costs are adjusted by the Area Cost Factor of 88% for Fort Bragg, North Carolina.

### Cost Analysis

Condition Assessment Cost	\$1,136,760.00
Replacement Cost	\$1,584,945.00
Condition Assessment to Replacement Cost Ratio	71.72%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building 5-5047 is not recommended.

## Attributes

01.Number of Units Constructed	24
02.Number of Units Used	24
03.Back of House Function	Yes
04.Single Room w/o FullKitchen	24
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	24
13.Renovated to Standard	20
14.Renovated to Extended Stay	0
15.Renovated to Family Suite	0
16.Delta renovation	-4

## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: Guest Rooms: The hard goods consist of two headboards, a nightstand, and dresser in each bedroom, a desk with chair, and a microfridge with microwave. All are in good condition. Soft goods consist of drapes on the windows, TV, mattress and box springs and bed coverings. All are currently in good condition.
- Recommendation: Replace all hard and soft goods in guest rooms.

### **Foundations**

#### **Standard Foundations**

- Analysis: The foundation is composed of linear concrete footings supporting load-bearing CMU/brick walls. No clear failures can be seen from perimeter. The foundation is in good condition.
- Recommendation: No corrective action required.

#### **Slab on Grade**

- Analysis: The concrete slab on grade with perimeter turndown is in good condition.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The structure is reinforced CMU/brick load-bearing walls while using precast concrete slabs for 2nd story floor. The superstructure is in good condition. One area adjacent to the employee area has a large settlement crack.
- Recommendation: Repair the settlement crack. No action required for the remainder of the building.

#### **Roof Construction**

- Analysis: The structure is reinforced brick load bearing walls with precast concrete slabs for the roof. The roof superstructure is in good condition.
- Recommendation: No corrective action required.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: The exterior walls are a brick veneer with precast concrete panels located on the edges of the floor and roof sections. The brick veneer is in good condition with the exception of cracks caused by settlement near the employee break/housing room. This area is in poor condition.
- Recommendation: Repair the area of cracked brick veneer near the employee break room.

#### **Exterior Windows**

- Analysis: The only window in the unit is a wall-to-wall storefront structure with built in door. This storefront opens to a small private patio/balcony. This is aluminum- framed, single-glazed with only the door as an operable section. These windows do not meet the ATFP standards. The windows are in fair condition.

- Recommendation: Replace the storefront with a new double-glazed unit with a door that meets the ATFP standards.

#### **Exterior Doors**

- Analysis: The other exterior doors are solid wood commercial grade doors with steel frames and electronic locks. The doors are in poor condition.

- Recommendation: Replace the doors, frames, and electronic locks.

#### **Roofing**

##### **Roof Coverings**

- Analysis: The building has a flat built-up roof with ballast. There are six roof drains. This roof was replaced in 1996 and is in good condition.

- Recommendation: No corrective action required.

#### **Interior Construction**

##### **Partitions**

- Analysis: Partitions are a mixture of drywall on wood studs and drywall on furred brick walls. Both types are in good condition.

- Recommendation: No corrective action required.

##### **Interior Doors**

- Analysis: The building has solid core wood doors in metal frames. The bathroom doors are the only interior doors and they are in poor condition.

- Recommendation: Replace bathroom doors, frames, and privacy lock sets.

##### **Fittings**

- Analysis: The toilet partitions are located in the former lobby restrooms, now employee area, and are in fair condition.

- Recommendation: Replace the toilet partitions.

#### **Stairs**

##### **Stair Construction**

- Analysis: The stairs are steel framed with concrete tread insets. There is only one set of stairs on the exterior which access eight living units and a linen room on the second floor. There are no elevators in the structure. The stairs are in good condition. The stair and balcony railings in the front and back of the second floor units are an open design that does not meet code but is otherwise in good condition.

- Recommendation: Replace the stair and balcony railings with code-compliant railings.

## **Interior Finishes**

### **Wall Finishes**

- Analysis: There is a combination of vinyl wall covering in the living area, painted drywall in the entrance area, and ceramic tile in the bathroom. The vinyl wall covering and the painted drywall is in fair condition. The ceramic tile is in good condition.
- Recommendation: Recover walls with vinyl wallcoverings where existing and install new wallcovering over painted surface.

### **Floor Finishes**

- Analysis: The units have carpet, the restrooms ceramic tile, and the entry area has vinyl tile. The carpet is in fair condition while the vinyl and ceramic tile is in good condition.
- Recommendation: Replace carpet and the ceramic tile if the plumbing is replaced.

### **Ceiling Finishes**

- Analysis: The ceilings are painted, textured concrete in the living area. They are in fair condition. The bathroom and entry area has acoustical ceiling tile in poor condition.
- Recommendation: Repaint the ceilings in living areas. Replace the acoustical ceiling tile with painted drywall.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: Each unit has an individual rest room containing a lavatory mounted in a built-in countertop, a water closet, and an enameled cast-iron tub/shower. Ventilation is a constant volume induced draft system. The plumbing fixtures are in fair condition and the countertop is in poor condition. The exhaust ventilation is in poor condition.
- Recommendation: Replace entire plumbing system including fixtures. Replace exhaust ventilation system.

### **Domestic Water Distribution**

- Analysis: Hot water is produced from a 100-gallon gas-fired water heater with an accompanying hot water tank. The boiler system was replaced in 1998 and is in good condition. The piping is original and is in poor condition.
- Recommendation: Replace the domestic water system piping.

## **HVAC**

### **Cooling Generating Systems**

- Analysis: The mechanical system is a two-pipe fan-coil hydronic hot water heating system and chilled water system with one thermostat to control the entire building. The hot water for heating is supplied by a hot water boiler located in the mechanical room. The reciprocating chiller is located in the mechanical room and the condenser is located in the equipment yard. The heating and cooling system is in poor condition.
- Recommendation: Replace the existing mechanical system with a system of PTAC units in each living area.

## **Fire Protection**

### **Sprinklers**

- Analysis: This building did not contain a sprinkler system.
- Recommendation: Install new sprinkler system.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: Electrical service is supplied to the building from an overhead pole-mounted transformer bank that goes underground into the mechanical room. Secondary service is 120/208Y volt 400 amp main disconnect. Distribution panels are located in the mechanical room and the 1st floor vending room to provide power for lighting and receptacles. The electrical service is in poor condition. Lighting is incandescent and is in fair condition. One fixture includes a ceiling fan with light. Outlets in the units are insufficient and in fair condition.
- Recommendation: Replace main service and panel to handle increased electrical loads. Replace branch circuits, electrical outlets and lighting.

### **Communications and Security**

- Analysis: The fire alarm system consists of hard-wired heat detectors and smoke detectors located in each room. The system does not have a connection to the fire department and is considered to be in poor condition.
- Recommendation: Replace fire alarm system.

## **Site Preparation**

### **Site Earthwork**

- Analysis: The site consists of grass covered yard areas and shared parking lots with access to main roads. The site is graded properly to allow for drainage. The site is in good condition.
- Recommendation: No corrective action required.

## **Major Functional Criteria**

### **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in building 3601, and are not included in this building.

- **Public Spaces**

Most of the public spaces are required at the main lodging building on post. Presently these are located in building 3601, and are not included in this building.

- **Standard Guest Room**



Room Size and Configuration: The rooms exceed size and configuration requirements.

Renovation Recommendation: Do not recommend adding to this building, because of condition assessment cost is already over the 50% of replacement cost.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>1.09%</b>	<b>\$7,380.78</b>
Parking: AC Pavement Damaged or Failing		\$7,380.78
<b>05 Metals</b>	<b>0.96%</b>	<b>\$6,462.72</b>
Railings - Inadequate or Missing		\$6,462.72
<b>08 Doors &amp; Windows</b>	<b>19.83%</b>	<b>\$133,869.63</b>
Exterior Steel Door - Beyond expected useful life		\$57,553.66
Storefront - Beyond Useful Life		\$58,102.08
Wood Door - Damaged or Failing		\$18,213.89
<b>09 Finishes</b>	<b>11.97%</b>	<b>\$80,791.07</b>
Acoustical Ceiling Tiles: Damaged or Failing		\$3,588.02
Base: Damaged or Failing		\$173.80
Carpet: Damaged or Failing		\$14,907.18
Drywall Ceilings: Damaged or Failing		\$6,820.07
Floor Tile: Damaged or Failing		\$11,283.15
Grout: Damaged or Failing		\$2,230.27
Interior ceilings: Paint Failing		\$3,289.64
Vinyl Wall Covering: Damaged or Failing		\$38,498.94
<b>10 Specialties</b>	<b>1.07%</b>	<b>\$7,242.71</b>
Sign: Damaged or Failing		\$1,663.20
Toilet Accessories: Beyond expected useful life		\$1,637.86
Toilet Partitions: Beyond Useful Life		\$3,941.65
<b>13 Special Construction</b>	<b>7.88%</b>	<b>\$53,178.73</b>
Fire Alarm System: Missing or Inadequate		\$9,392.64
Fire Sprinklers: Missing or Inadequate		\$43,786.09
<b>15 Mechanical</b>	<b>25.21%</b>	<b>\$170,140.99</b>
Boiler: Abandoned in place		\$481.36
Condensing Unit: Abandoned in place		\$880.00
Domestic water system: Beyond expected useful life		\$25,507.23
Pipe, sewer or waste: Beyond expected useful life		\$12,238.42
PTAC: Missing or inadequate		\$43,494.53
Restroom exhaust: Damaged or failing		\$10,223.84
Sink & vanity: Replace due to remodel		\$17,679.38
Tub: Beyond expected useful life		\$33,468.86
Urinal: Beyond expected useful life		\$921.67
Water Chiller: Abandoned in place		\$1,701.92
Water closet: Beyond expected useful life		\$23,543.78
<b>16 Electrical</b>	<b>14.20%</b>	<b>\$95,850.75</b>
Branch Circuits: Beyond Expected Useful Life		\$34,670.18
Fixture: Incandescent fixture beyond expected life		\$45,855.37
Main service: Beyond expected useful life		\$15,325.20
<b>19 FF&amp;E</b>	<b>17.78%</b>	<b>\$120,000.00</b>
Hard and soft goods: Beyond expected useful life		\$120,000.00

<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$674,917.00</b>
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**Additional Hard Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Spirit	0.50%	\$3,712.04
Force Protection	9.00%	\$67,150.87
General Conditions	10.00%	\$67,491.70
<b>Total Additional Hard Cost</b>		<b>\$138,354.61</b>

**Soft Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	10.00%	\$81,327.16
SIOH Conus	6.50%	\$58,148.92
Design	10.00%	\$81,327.16
08 MYr Inflation Fct	9.93%	\$102,683.63
<b>Total Soft Cost</b>		<b>\$323,486.88</b>
<b>Total Project</b>		<b>\$1,136,758.49</b>

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>2.62%</b>	<b>\$28,034.60</b>
Site Earthwork		\$28,034.60
<b>03 Concrete</b>	<b>15.06%</b>	<b>\$161,206.71</b>
Floor Construction		\$92,593.11
Slab on Grade		\$20,715.20
Stair Construction		\$6,468.00
Standard Foundations		\$41,430.40
<b>04 Masonry</b>	<b>6.29%</b>	<b>\$67,354.96</b>
Exterior Walls		\$67,354.96
<b>07 Thermal &amp; Moisture Protection</b>	<b>6.95%</b>	<b>\$74,412.79</b>
Roof Construction		\$23,035.16
Roof Coverings		\$51,377.63
<b>08 Doors &amp; Windows</b>	<b>10.50%</b>	<b>\$112,434.96</b>
Exterior Doors		\$8,646.00
Exterior Windows		\$84,480.00
Interior Doors		\$19,308.96
<b>09 Finishes</b>	<b>13.44%</b>	<b>\$143,832.57</b>
Ceiling Finishes		\$22,080.62
Floor Finishes		\$54,318.63
Partitions		\$38,612.62
Wall Finishes		\$28,820.70
<b>10 Specialties</b>	<b>0.12%</b>	<b>\$1,327.04</b>
Fittings		\$1,327.04
<b>13 Special Construction</b>	<b>4.66%</b>	<b>\$49,882.20</b>
Communications & Security		\$22,455.28
Sprinklers		\$27,426.92
<b>15 Mechanical</b>	<b>24.11%</b>	<b>\$258,128.64</b>
Cooling Generating Systems		\$66,288.64
Domestic Water Dist		\$31,680.00
Plumbing Fixtures		\$160,160.00
<b>16 Electrical</b>	<b>6.91%</b>	<b>\$73,925.28</b>
Electrical Service & Distribution		\$73,925.28
<b>19 FF&amp;E</b>	<b>9.34%</b>	<b>\$100,000.00</b>
Interior FF&E allowance		\$100,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$1,070,539.75</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$5,887.97
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$107,053.98
<b>Total Additional Hard Cost</b>		<b>\$112,941.94</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$59,174.08
SIOH Conus	6.50%	\$80,772.63
Design	10.00%	\$118,348.17
08 MYr Inflation Fct	9.93%	\$143,168.41
<b>Total Soft Cost</b>		<b>\$401,463.29</b>
<b>Total Project Cost for Replacement</b>		<b>\$1,584,944.99</b>

**INSERT BUILDING 55047 FLOOR PLANS HERE**



*Building D-3601 (Moon Hall).*

## Building D-3601

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Building D-3601 was constructed in 1966. The 121,290 square foot facility contains 258 lodging units: 242 living units with private baths and 16 two-room suites. The building is functioning as 242 standard stay rooms and 16 family suites.

### Significant Assumptions

The replacement and renovation cost models are based on 242 standard stay rooms and 16 family suites.

The renovation plan if required, would use the existing foot print with the plan reworked to meet current lodging size requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix

All costs are adjusted by the Area Cost Factor of 88% for Fort Bragg, North Carolina.

### Cost Analysis

Condition Assessment Cost	\$13,699,240.00
Replacement Cost	\$20,224,820.00
Condition Assessment to Replacement Cost Ratio	67.73%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building D-3601 is not recommended.

## Attributes

01.Number of Units Constructed	258
02.Number of Units Used	258
03.Back of House Function	Yes
04.Single Room w/o FullKitchen	242
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	16
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	242
11.Operating as Extended Stay	16
12.Operating as Family Suite	0
13.Renovated to Standard	242
14.Renovated to Extended Stay	0
15.Renovated to Family Suite	16
16.Delta renovation	0

## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: Guest Rooms: The typical room hard goods consist of a headboard, a nightstand, an entertainment armoire, a desk/table with chair, and a TV. Soft goods consist of drapes on the windows, mattress and box springs, and bed coverings. All are in currently in good condition. The suites also have a couch, coffee table, dresser, and an occasional table.
- Recommendation: Replace all hard and soft goods in guest rooms at the end of their useful life.

### **Foundations**

#### **Standard Foundations**

- Analysis: Foundation is composed of a concrete linear footing and column footings that supports the concrete frame and walls. No clear failures can be seen from perimeter. Foundation is in good condition.
- Recommendation: No corrective action required.

#### **Slab on Grade**

- Analysis: Concrete slab on grade appears to be in good condition.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The second through sixth floors are constructed of concrete "T" slabs with additional concrete topping in the areas of the bathrooms. A concrete columns and beams framework supports the slabs. The slab sections appear to be in good condition.
- Recommendation: No corrective action required.

#### **Roof Construction**

- Analysis: The roof structure is constructed of concrete "T" slabs supported by concrete columns and beams. The roof slab sections appear to be in good condition.
- Recommendation: No corrective action required.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: The exterior walls are a brick veneer with precast concrete fascia panels located on the edges of the floor and roof sections. The brick veneer is in good condition.
- Recommendation: Repair the area of cracked brick veneer near the employee break area.

#### **Exterior Windows**



- Analysis: The window in the unit is included in a near full height storefront structure. Windows are aluminum-framed, double-glazed. These are not original but do not meet the ATFP standards. The windows are in fair condition. The windows in the stairwells are steel framed, single-glazed. Some panels contained safety wire. These windows are in fair condition.

- Recommendation: Replace the storefront structure with new double-glazed windows that meets the ATFP standards.

#### **Exterior Doors**

- Analysis: The front entrance doors at the lobby are glazed sliding doors. The rear doors also glazed but manually operated. Stairwell and other doors are commercial grade metal with metal frames. Some of these doors contain glazing. These doors are in fair condition.

- Recommendation: Replace all exterior doors.

#### **Roofing**

##### **Roof Coverings**

- Analysis: Slightly sloped built-up roof with ballast. Roof has several roof drains. Roof was replaced in 1996 but there are several areas of ponding which have leaked to the inside of the facility. The roof is in fair condition.

- Recommendation: Replace the roof and insulation.

#### **Interior Construction**

##### **Partitions**

- Analysis: Partitions are mixture of plaster on lathe on metal studs and plaster on masonry/concrete walls. The plaster on the wall at the window is water damaged in many rooms. Plaster walls are in poor condition.

- Recommendation: Repair plaster walls around windows.

##### **Interior Doors**

- Analysis: Solid core wood doors in metal frames. The room entrance doors off the corridors appear to be a non-standard size or design. Entrance doors did not appear to be fire-rated. The room entrance doors have keyless locksets. All the interior doors are in fair condition.

- Recommendation: Replace the entrance and interior room doors and frames. Modify room entrance opening to accept standard door size.

##### **Fittings**

- Analysis: Toilet partitions in the restrooms near the lobby are in fair condition.

- Recommendation: Replace the toilet partitions.

#### **Stairs**

##### **Stair Construction**

- Analysis: Stairs are steel framed with concrete tread insets. Each lodging wing contains a set of stairs that exit to the exterior on the first floor. A fourth stairwell is adjacent to the various lobbies. The stairs are in good condition, although one stairwell is affected by a roof leak. There are two passenger elevators in the structure in good condition.
- Recommendation: No corrective action required.

## **Interior Finishes**

### **Wall Finishes**

- Analysis: Most rooms have painted plaster or drywall walls with a vinyl wall covering accent wall. The bathroom has ceramic tile wainscot and vinyl wall covering. On floors 1-3, these finishes are in good condition due to recent renovation. On floors 4-6, these are in fair condition. In floors 4-6 living units, some plaster walls are cracking and disintegrating in the areas around the fan-coils and in the bathrooms.
- Recommendation: Repair plaster walls. Recover walls with vinyl wall coverings. Replace the ceramic tile wainscot with full height ceramic tile wall tile.

### **Floor Finishes**

- Analysis: The units have carpet and the bathrooms have ceramic tile. On floors 1-3, these floor finishes are in good condition due to recent renovation. On floors 4-6, these finishes are in fair condition.
- Recommendation: Replace carpet and the ceramic tile floor on floors 4-6. Replace carpet and the ceramic tile floor on floors 1-3 at end of their useful life.

### **Ceiling Finishes**

- Analysis: Ceilings are painted, textured plaster in the living areas. The bathroom ceilings are painted plaster or drywall. On floors 1-3, these ceiling finishes are in good condition due to recent renovation. On floors 4-6, these finishes are in fair condition.
- Recommendation: Repaint ceilings in living areas and bathrooms.

## **Conveying**

### **Elevators and Lifts**

- Analysis: There are two passenger elevators in the facility. They were refurbished in 1990 and are in good condition. There is no service elevator.
- Recommendation: No corrective action required.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: Each unit has an individual bathroom. Depending on level of renovation, each contains a wall mounted porcelain sink, containing a lavatory/cultured marble countertop, a flush-valve toilet, and an enameled cast-iron tub/shower. The latest renovation (3rd floor) uses a vanity, tank-type toilet, and acrylic tub and liner. Ventilation is a constant volume induced draft system. The plumbing fixtures and countertop are in good condition. The exhaust ventilation is in poor condition. The bathrooms on floors 1-3 have been renovated as of December 2002 but the plumbing lines are original.
- Recommendation: Replace entire plumbing system including fixtures.

#### **Domestic Water Distribution**

- Analysis: Hot water is produced from a propane gas-fired boiler. The system was upgraded/converted in 1998 but there are still hot water problems. The boiler and circulating pumps are in fair condition.
- Recommendation: Replace the boiler and circulating pumps. Install a hot water storage tank to supplement the existing boiler.

### **HVAC**

#### **Cooling Generating Systems**

- Analysis: The mechanical system is a two-pipe fan-coil hydronic hot water heating system and chilled water system with one thermostat to control the entire building. A central plant supplies both the incoming hot water and chilled water - thus requiring a seasonal switchover. The individual room fan-coils have condensation and supply/return line leaks. The mechanical room piping system is heavily corroded and is leaking. Common/public area temperatures are supplemented by air handling units - three in the main mechanical room and one on each of the upper floors. The HVAC system is in poor condition.
- Recommendation: Replace existing fan-coil mechanical system with a system of PTAC units in each living area. Replace the existing air handling units and replace the mechanical room HVAC piping and heat exchanger.

### **Fire Protection**

#### **Sprinklers**

- Analysis: This building did not contain a sprinkler system. There are wet standpipes located in the stairwells.
- Recommendation: Install new sprinkler system.

### **Electrical**

#### **Electrical Service/Distribution**

- Analysis: Electric service is supplied to the building through an underground service into the mechanical room. Secondary service is 1800 amps but voltage could not be verified. Distribution panels are located in the utility rooms on each floor. The electrical service is original and in poor condition.

Lighting has been replaced as part of a renovation on floors 1 - 3. These are in good condition. Lighting on floors 4-6 is in fair condition. Lighting in the corridors uses commercial-type fluorescent fixtures. Electrical outlets in the units that have been renovated meet the standard and are in good condition. The outlets in the unrenovated rooms are insufficient and in fair condition.

- Recommendation: Replace main service and panel to handle increased electrical loads.  
Replace branch circuits, electrical outlets and lighting.

#### **Communications and Security**

- Analysis: The fire alarm system consists of hard-wired heat detectors and smoke detector located in each room. The system has an annunciator panel and appears to be connected to the fire department. The system is in good condition. Although the alarm system has been renovated, there seemed to be a shortage of emergency exit signs.
- Recommendation: Install additional emergency exit signs.

#### **Equipment**

##### **Other Equipment**

- Analysis: Suites contain a "hospitality" area, which includes base and wall cabinets, counter space, a sink, micro-fridge, and a microwave. All are in good condition.
- Recommendation: No corrective action required.

#### **Site Preparation**

##### **Site Earthwork**

- Analysis: The site consists of grass covered yard areas and shared parking lots with access to main roads. The site is graded properly to allow for drainage. The site is in good condition.
- Recommendation: No corrective action required.

#### **Site Improvements**

##### **Parking Lots**

- Analysis: The two main asphalt parking lots have moderate cracking. They are in fair condition. They have adequate parking for the guests but violate ATRP requirements. The concrete sidewalks on the front and sides are cracked and uneven in areas. They are in fair condition.
- Recommendation: Resurface the parking lot. Replace the sidewalks.

#### **Site Electrical Utilities**

##### **Site Lighting**

- Analysis: The site lighting is in good condition.
- Recommendation: No corrective action required.

#### **Major Functional Criteria**

- **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Breakfast Prep Area / Kitchen

Does not exist.

Renovation Recommendation: Space included in new Lodging Facility.

General Storage and Bulk Storage

Does not exist.

Renovation Recommendation: Space included in new Lodging Facility.

Housekeeping Laundry and Office

Does not Exist.

Renovation Recommendation: Space included in new Lodging Facility.

Administrative Spaces including Office Manager, Asst. Mgr, and Front Desk Manager.

Space exceeds standards and is spread out through several rooms.

Renovation Recommendation: Space is configured into one area in new Lodging Facility.

- **Public Spaces**

Public Corridors

Corridors are only 5' wide, standard is 6' wide.

Renovation Recommendation: Leave corridor width as is.

It is felt this deficit is not critical to the intent of the standard and is not included in the Condition Assessment or Renovation cost.

Breakfast Bar / Seating Area

Does not exist.

Renovation Recommendation: Space included in new Lodging Facility.

Study Rooms

Does not exist.

Renovation Recommendation: Space included in new Lodging Facility.

- **Standard Guest Room**

Room size and configuration: The rooms meet the majority of the requirements.

Renovation Recommendation: Do not recommend adding to this building, because of condition assessment cost is already over the 50% of replacement cost.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>0.29%</b>	<b>\$23,963.40</b>
Parking: AC Pavement Damaged or Failing		\$17,713.87
Walks: Concrete Walk Damaged or Failing		\$6,249.53
<b>07 Thermal &amp; Moisture Protection</b>	<b>0.70%</b>	<b>\$57,223.86</b>
Built-up Roof: Beyond Useful Life		\$56,879.60
Roof Expansion Joint: Damaged or Failing		\$344.26
<b>08 Doors &amp; Windows</b>	<b>17.94%</b>	<b>\$1,459,171.50</b>
Al. Windows - Beyond Useful Life		\$705,755.28
Exterior Steel Door - Beyond expected useful life		\$5,641.15
Steel Window - Beyond Useful Life		\$73,476.48
Storefront - Beyond Useful Life		\$9,491.68
Wood Door - Beyond Useful Life		\$664,806.91
<b>09 Finishes</b>	<b>17.46%</b>	<b>\$1,419,760.46</b>
Acoustical Ceiling & Grid: Beyond expt useful life		\$11,487.99
Acoustical Ceiling Tiles: Damaged or Failing		\$33,351.80
Carpet: Beyond Useful Life		\$148,802.22
Carpet: Damaged or Failing		\$52,951.18
Floor Tile: Damaged or Failing		\$93,928.30
Interior ceilings: Paint Failing		\$39,448.29
Interior walls: Paint failing		\$7,991.53
Plaster Partitions: Damaged or Failing		\$43,142.00
Quarry Floor Tile: Damaged or Failing		\$1,789.97
VCT: Beyond Useful Life		\$4,545.87
Vinyl Wall Covering: Beyond expected useful life		\$136,935.31
Vinyl Wall Covering: Damaged or Failing		\$330,122.21
Wall Tile: Damaged or Failing		\$515,263.79
<b>10 Specialties</b>	<b>0.05%</b>	<b>\$3,941.65</b>
Toilet Partitions: Beyond Useful Life		\$3,941.65
<b>13 Special Construction</b>	<b>6.31%</b>	<b>\$513,577.37</b>
Fire Alarm System: Beyond Useful Life		\$90,724.92
Fire Sprinklers: Missing or Inadequate		\$422,852.45
<b>15 Mechanical</b>	<b>30.69%</b>	<b>\$2,496,500.91</b>
AHU: Beyond expected useful life		\$52,085.44
Circulator pump: Damaged or failing		\$2,005.70
Domestic water system: Beyond expected useful life		\$246,389.81
Heat Exchanger: Beyond expected useful life		\$26,954.40
Hot water storage tank: Damaged or failing		\$13,186.80
HWP: Beyond expected useful life		\$502.04
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Restroom exhaust: Damaged or failing		\$769,916.23
Sewage System: Beyond expected useful life		\$118,224.53
Sink & vanity: Replace due to remodel		\$194,473.14
Sink, janitorial: Beyond expected useful life		\$11,370.48

Tub: Beyond expected useful life		\$363,973.90
Urinal: Beyond expected useful life		\$921.67
Water closet: Beyond expected useful life		\$244,157.76
Water heater: Missing or inadequate		\$4,966.72
<b>16 Electrical</b>	<b>10.69%</b>	<b>\$869,382.59</b>
Branch Circuits: Beyond Expected Useful Life		\$334,880.72
Emergency light: Beyond expected useful life		\$6.15
Exit Light: Beyond expected useful life		\$6,732.00
Fixture: Incandescent fixture beyond expected life		\$442,951.08
Main service: Beyond expected useful life		\$84,812.64
<b>19 FF&amp;E</b>	<b>15.86%</b>	<b>\$1,290,000.00</b>
Hard and soft goods: Beyond expected useful life		\$1,290,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$8,133,522.00</b>

#### **Additional Hard Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Spirit	0.50%	\$44,734.37
Force Protection	9.00%	\$809,244.77
General Conditions	10.00%	\$813,352.20
<b>Total Additional Hard Cost</b>		<b>\$1,667,331.34</b>

#### **Soft Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	10.00%	\$980,085.33
SIOH Conus	6.50%	\$700,761.01
Design	10.00%	\$980,085.33
08 MYr Inflation Fct	9.93%	\$1,237,455.25
<b>Total Soft Cost</b>		<b>\$3,898,386.94</b>
<b>Total Project</b>		<b>\$13,699,240.28</b>

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>2.27%</b>	<b>\$309,949.75</b>
Parking Lots		\$189,939.20
Site Earthwork		\$120,010.55
<b>03 Concrete</b>	<b>29.27%</b>	<b>\$3,998,888.39</b>
Floor Construction		\$3,247,605.99
Slab on Grade		\$88,849.20
Stair Construction		\$129,360.00
Standard Foundations		\$533,073.20
<b>04 Masonry</b>	<b>3.59%</b>	<b>\$491,098.05</b>
Exterior Walls		\$491,098.05
<b>07 Thermal &amp; Moisture Protection</b>	<b>3.77%</b>	<b>\$514,915.89</b>
Roof Construction		\$296,698.50
Roof Coverings		\$218,217.39
<b>08 Doors &amp; Windows</b>	<b>8.80%</b>	<b>\$1,201,688.40</b>
Exterior Doors		\$29,581.20
Exterior Windows		\$922,240.00
Interior Doors		\$249,867.20
<b>09 Finishes</b>	<b>13.78%</b>	<b>\$1,882,222.19</b>
Ceiling Finishes		\$291,860.24
Floor Finishes		\$698,239.12
Partitions		\$497,952.10
Wall Finishes		\$394,170.74
<b>10 Specialties</b>	<b>0.02%</b>	<b>\$2,982.76</b>
Fittings		\$2,982.76
<b>11 Equipment</b>	<b>0.36%</b>	<b>\$49,280.00</b>
Other Equipment		\$49,280.00
<b>13 Special Construction</b>	<b>4.70%</b>	<b>\$641,820.13</b>
Communications & Security		\$288,925.67
Sprinklers		\$352,894.46
<b>14 Conveying Systems</b>	<b>1.38%</b>	<b>\$189,024.00</b>
Elevators and Lifts		\$189,024.00
<b>15 Mechanical</b>	<b>15.84%</b>	<b>\$2,164,408.40</b>
Cooling Generating Systems		\$852,917.12
Domestic Water Dist		\$421,344.00
Plumbing Fixtures		\$890,147.28
<b>16 Electrical</b>	<b>6.77%</b>	<b>\$924,431.64</b>
Electrical Service & Distribution		\$916,705.24
Site Lighting		\$7,726.40
<b>19 FF&amp;E</b>	<b>9.44%</b>	<b>\$1,290,000.00</b>
Interior FF&E allowance		\$1,290,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$13,660,709.61</b>

### Additional Hard Cost (Template: Army Lodging New Construction)



<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Spirit	0.50%	\$75,133.90
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$1,366,070.96
<b>Total Additional Hard Cost</b>		<b>\$1,441,204.86</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$755,095.72
SIOH Conus	6.50%	\$1,030,705.66
Design	10.00%	\$1,510,191.45
08 MYr Inflation Fct	9.93%	\$1,826,912.20
<b>Total Soft Cost</b>		<b>\$5,122,905.03</b>
<b>Total Project Cost for Replacement</b>		<b>\$20,224,819.50</b>

**INSERT BUILDING D3601 (FLRS. 1-6) PLANS HERE**



*Building D-3705 (Hardy Hall).*

## **Building D-3705**

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Building D-3705 was constructed in 1966. The 121,290 square foot facility contains 266 lodging units: 258 living units with private baths and 8 two-room suites. The building is functioning as 258 standard stay rooms and 8 family suites.

### **Significant Assumptions**

The replacement and renovation cost models are based on 258 standard stay rooms and 8 family suites.

The renovation plan if required, would use the existing foot print with the plan reworked to meet current lodging size requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix

All costs are adjusted by the Area Cost Factor of 88% for Fort Bragg, North Carolina.

### **Cost Analysis**

Condition Assessment Cost	\$12,572,980.00
Replacement Cost	\$20,224,820.00
Condition Assessment to Replacement Cost Ratio	62.17%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building D-3705 is not recommended.

## **Attributes**

01.Number of Units Constructed	266
02.Number of Units Used	266
03.Back of House Function	Yes
04.Single Room w/o FullKitchen	258
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	8
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	258
11.Operating as Extended Stay	0
12.Operating as Family Suite	8
13.Renovated to Standard	258
14.Renovated to Extended Stay	0
15.Renovated to Family Suite	8
16.Delta renovation	0

## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: Guest Rooms: The typical room hard goods consist of a headboard, a nightstand, an entertainment armoire, and a desk/table with chair. Soft goods consist of drapes on the windows, TV, mattress and box springs, and bed coverings. All are in currently in fair condition. The suites also have a couch, recliner, dresser, and an occasional table.
- Recommendation: Replace all hard and soft goods in guest rooms.

### **Foundations**

#### **Standard Foundations**

- Analysis: The foundation is composed of a concrete linear footing and column footings that support the concrete frame and walls. No clear failures can be seen from the perimeter. Foundation is in good condition.
- Recommendation: No corrective action required.

#### **Slab on Grade**

- Analysis: The concrete slab on grade appears to be in good condition.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The second through sixth floors are constructed of concrete "T" slabs with additional concrete in bathrooms. A framework of concrete columns and beams supports the slabs. The slab sections appear to be in good condition.
- Recommendation: No corrective action required.

#### **Roof Construction**

- Analysis: The roof slab sections appear to be in good condition.
- Recommendation: No corrective action required.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: The exterior walls are brick veneer, with precast concrete panels on the edges of the floor and roof sections. The brick veneer is in good condition.
- Recommendation: No corrective action required.

#### **Exterior Windows**

- Analysis: Windows are typically included in a near full height storefront structure. Windows are original, aluminum-framed, and double-glazed, and are in fair condition. The windows in the stairwells are steel framed and single-glazed. Some windows contain safety wire. These windows are in fair condition.
- Recommendation: Replace the storefront structure with new double-glazed windows.

#### **Exterior Doors**

- Analysis: The front entrance doors at the lobby are glazed sliding doors. The rear doors also glazed but manually operated. Stairwell and other doors are commercial grade metal with metal frames. These doors are in fair condition.
- Recommendation: Replace all exterior doors.

### **Roofing**

#### **Roof Coverings**

- Analysis: Slightly sloped built-up roof with ballast. Roof has several roof drains. Roof was replaced in 1996 but there are several areas of ponding which are leaking. The roof expansion joints are separating. The roof and expansion joints are in poor condition.
- Recommendation: Replace the roof, insulation, and expansion joints.

### **Interior Construction**

#### **Partitions**

- Analysis: Partitions are both plaster on lath and plaster on masonry or concrete walls. Areas near the windows are showing water damage. Both types are in fair condition.
- Recommendation: Repair the damaged plaster areas.

#### **Interior Doors**

- Analysis: Doors are typically solid core wood doors in metal frames, and room entrance doors appear to be a non-standard size. The room entrance doors have keyless locksets. All interior doors are in fair condition.
- Recommendation: Replace the entrance and interior room doors and frames. Modify room entrance opening to accept standard door size.

#### **Fittings**

- Analysis: Toilet partitions in the restrooms located near the lobby are in fair condition.
- Recommendation: Replace the toilet partitions.

### **Stairs**

#### **Stair Construction**

- Analysis: Stairs are steel framed with concrete treads. Each lodging wing contains a set of stairs that exit to the exterior on the first floor. A fourth stairwell is adjacent to the lobbies. The stairs are in good condition, although one stairwell is affected by a roof leak.
- Recommendation: No corrective action required.

## **Interior Finishes**

### **Wall Finishes**

- Analysis: Most walls are painted plaster or drywall with accent walls using vinyl wall covering. The bathroom has ceramic tile wainscot and vinyl wall covering. These finishes are in fair condition. Many plaster walls are cracking and disintegrating in the areas around the fan-coils and windows.
- Recommendation: Recover walls with vinyl wall coverings. Replace the ceramic tile wainscot with full height ceramic tile wall tile.

### **Floor Finishes**

- Analysis: The units have carpet and the bathrooms have ceramic tile. These floor finishes are in fair condition.
- Recommendation: Replace carpet and ceramic tile floor.

### **Ceiling Finishes**

- Analysis: Ceilings are painted, textured plaster in the living areas, and are in good condition. The bathroom ceilings are mostly acoustical ceiling tile, and are in poor condition.
- Recommendation: Repaint ceilings in living areas. Replace acoustical ceiling tiles in bathrooms with painted drywall.

## **Conveying**

### **Elevators and Lifts**

- Analysis: There are two passenger elevators in the facility. They were refurbished in 1990 and are in good condition. There is no service elevator.
- Recommendation: No corrective action required.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: Each unit has an individual bathroom. Each contains a wall mounted porcelain sink or vanity with sink, a flush-valve toilet, and an enameled cast-iron tub/shower. Ventilation is a constant volume induced draft system. Plumbing fixtures are in good condition. Vanity cabinets, where found, are in poor condition. Exhaust ventilation is in poor condition. The plumbing lines are original and are in poor condition.
- Recommendation: Replace entire plumbing system, including fixtures.

### **Domestic Water Distribution**

- Analysis: Hot water is produced from a propane gas-fired boiler. The system was upgraded and converted in 1998 but there are still hot water problems. The boiler and circulating pumps are in fair condition.
- Recommendation: Replace the boiler. Install a hot water storage tank to supplement the new boiler. Replace circulating pumps.

## **HVAC**

### **Cooling Generating Systems**

- **Analysis:** The mechanical system is a two-pipe fan-coil hydronic hot water heating system and chilled water system with one thermostat to control the entire building. A central plant supplies both the incoming hot water and chilled water, and requires a seasonal switchover. The individual room fan-coils have condensation and supply and return line leaks. The mechanical room piping system is heavily corroded and is leaking. Common and public area temperatures are supplemented by three air handling units in the main mechanical room and one on each of the upper floors. The HVAC system is in poor condition.
- **Recommendation:** Replace existing fan-coil mechanical system. Replace the existing air handling units and replace the mechanical room HVAC piping and heat exchanger.

## **Fire Protection**

### **Sprinklers**

- **Analysis:** This building did not contain a sprinkler system. There are wet standpipes located in the stairwells.
- **Recommendation:** Install new sprinkler system.

## **Electrical**

### **Electrical Service/Distribution**

- **Analysis:** Electrical service is supplied to the building through an underground service into the mechanical room. Secondary service is 1800 amps. Distribution panels are located in the utility rooms on each floor. The electrical service is original and in poor condition. Lighting has been replaced on some floors as part of a renovation. These are in good condition. Lighting on other floors is in fair condition. Lighting in the corridors uses commercial-type fluorescent fixtures. Electrical outlets in the units that have been renovated meet the standard and are in good condition. The outlets in the unrenovated rooms are insufficient and in fair condition.
- **Recommendation:** Replace main service and panel to handle increased electrical loads.  
Replace branch circuits, electrical outlets and lighting.

### **Communications and Security**

- **Analysis:** The fire alarm system consists of hard-wired heat and smoke detectors located in each room. The system has an annunciator panel and appears to be connected to the fire department. The system is in fair condition.
- **Recommendation:** Replace the fire alarm system, exit lights, and emergency lighting.

## **Equipment**

### **Other Equipment**

- **Analysis:** Suites contain a hospitality area, which includes base and wall cabinets, counter space, a sink, micro-fridge, and a microwave. All are in good condition.
- **Recommendation:** No corrective action required.

## **Site Preparation**

#### **Site Earthwork**

- Analysis: The site consists of grass covered yard areas and shared parking lots with access to main roads, and is in good condition. The site is graded properly to allow for drainage.
- Recommendation: No corrective action required.

#### **Site Improvements**

##### **Parking Lots**

- Analysis: The two main asphalt parking lots have moderate cracking, and are in fair condition. They have adequate parking for guests. The concrete sidewalks on the front and sides are cracked and uneven in areas, and are in fair condition.
- Recommendation: Resurface the parking lot. Replace the sidewalks.

#### **Site Electrical Utilities**

##### **Site Lighting**

- Analysis: The site lighting is in good condition.
- Recommendation: No corrective action required.

### **Major Functional Criteria**

- **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in building 3601, and are not included in this building

- **Public Spaces**

Most of the public spaces are required at the main lodging building on post. Presently these are located in building 3601, and are not included in this building.

- **Standard Guest Room**

Most of the public spaces are required at the main lodging building on post. Presently these are located in building 3601, and are not included in this building.



## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>0.32%</b>	<b>\$23,963.40</b>
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Storefront - Beyond Useful Life		\$9,491.68
Wood Door - Beyond Useful Life		\$664,806.91
<b>09 Finishes</b>	<b>19.02%</b>	<b>\$1,419,760.46</b>
Acoustical Ceiling & Grid: Beyond expt useful life		\$11,487.99
Acoustical Ceiling Tiles: Damaged or Failing		\$33,351.80
Carpet: Beyond Useful Life		\$148,802.22
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Main service: Beyond expected useful life		\$84,812.64
<b>19 FF&amp;E</b>	<b>17.82%</b>	<b>\$1,330,000.00</b>
Hard and soft goods: Beyond expected useful life		\$1,330,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$7,464,837.00</b>

#### **Additional Hard Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Spirit	0.50%	\$41,056.60
Force Protection	9.00%	\$742,713.96
General Conditions	10.00%	\$746,483.70
<b>Total Additional Hard Cost</b>		<b>\$1,530,254.26</b>

#### **Soft Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	10.00%	\$899,509.13
SIOH Conus	6.50%	\$643,149.03
Design	10.00%	\$899,509.13
08 MYr Inflation Fct	9.93%	\$1,135,719.77
<b>Total Soft Cost</b>		<b>\$3,577,887.05</b>
<b>Total Project</b>		<b>\$12,572,978.31</b>

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>2.27%</b>	<b>\$309,949.75</b>
Parking Lots		\$189,939.20
Site Earthwork		\$120,010.55
<b>03 Concrete</b>	<b>29.27%</b>	<b>\$3,998,888.39</b>
Floor Construction		\$3,247,605.99
Slab on Grade		\$88,849.20
Stair Construction		\$129,360.00
Standard Foundations		\$533,073.20
<b>04 Masonry</b>	<b>3.59%</b>	<b>\$491,098.05</b>
Exterior Walls		\$491,098.05
<b>07 Thermal &amp; Moisture Protection</b>	<b>3.77%</b>	<b>\$514,915.89</b>
Roof Construction		\$296,698.50
Roof Coverings		\$218,217.39
<b>08 Doors &amp; Windows</b>	<b>8.80%</b>	<b>\$1,201,688.40</b>
Exterior Doors		\$29,581.20
Exterior Windows		\$922,240.00
Interior Doors		\$249,867.20
<b>09 Finishes</b>	<b>13.78%</b>	<b>\$1,882,222.19</b>
Ceiling Finishes		\$291,860.24
Floor Finishes		\$698,239.12
Partitions		\$497,952.10
Wall Finishes		\$394,170.74
<b>10 Specialties</b>	<b>0.02%</b>	<b>\$2,982.76</b>
Fittings		\$2,982.76
<b>11 Equipment</b>	<b>0.36%</b>	<b>\$49,280.00</b>
Other Equipment		\$49,280.00
<b>13 Special Construction</b>	<b>4.70%</b>	<b>\$641,820.13</b>
Communications & Security		\$288,925.67
Sprinklers		\$352,894.46
<b>14 Conveying Systems</b>	<b>1.38%</b>	<b>\$189,024.00</b>
Elevators and Lifts		\$189,024.00
<b>15 Mechanical</b>	<b>15.84%</b>	<b>\$2,164,408.40</b>
Cooling Generating Systems		\$852,917.12
Domestic Water Dist		\$421,344.00
Plumbing Fixtures		\$890,147.28
<b>16 Electrical</b>	<b>6.77%</b>	<b>\$924,431.64</b>
Electrical Service & Distribution		\$916,705.24
Site Lighting		\$7,726.40
<b>19 FF&amp;E</b>	<b>9.44%</b>	<b>\$1,290,000.00</b>
Interior FF&E allowance		\$1,290,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$13,660,709.61</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$75,133.90
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$1,366,070.96
<b>Total Additional Hard Cost</b>		<b>\$1,441,204.86</b>

**Soft Cost (Template: Army Lodging New Construction)**

Parameter Name	Percent	Amount
Contingency	5.00%	\$755,095.72
SIOH Conus	6.50%	\$1,030,705.66
Design	10.00%	\$1,510,191.45
08 MYr Inflation Fct	9.93%	\$1,826,912.20
<b>Total Soft Cost</b>		<b>\$5,122,905.03</b>
<b>Total Project Cost for Replacement</b>		<b>\$20,224,819.50</b>

**INSERT BUILDING D3705 (FLRS. 1-6) PLANS HERE**



Building D-4215 (Delmont House).

## Building D-4215

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Building D-4215 (Delmont Guest House) was constructed in 1971. The 30,647 square foot facility contains 74 lodging units in the standard room configuration. The building is functioning as 74 family suites.

### Significant Assumptions

The replacement and renovation cost models are based on 74 extended stay rooms.

The renovation plan if required, would use the existing foot print with the plan reworked to meet current lodging size requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix

All costs are adjusted by the Area Cost Factor of 88% for Fort Bragg, North Carolina.

### Cost Analysis

Condition Assessment Cost	\$3,763,530.00
Replacement Cost	\$6,066,490.00
Condition Assessment to Replacement Cost Ratio	62.04%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building D-4215 is not recommended.

## Attributes

01.Number of Units Constructed	75
02.Number of Units Used	74
03.Back of House Function	Yes
04.Single Room w/o FullKitchen	75
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	74
13.Renovated to Standard	0
14.Renovated to Extended Stay	74
15.Renovated to Family Suite	0
16.Delta renovation	-1

## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: Guest Rooms: The hard goods consist of two headboards, a nightstand, and dresser in each bedroom, an easy chair, and a micro fridge with microwave. All are in fair condition. Soft goods consist of drapes on the windows, mattress and box springs, a TV, and bed coverings. All are currently in fair condition.
- Recommendation: Replace all hard and soft goods in guest rooms at the end of their useful life.

### **Foundations**

#### **Standard Foundations**

- Analysis: Foundation is composed of below grade concrete footings that support load-bearing CMU walls. No clear failures can be seen from the perimeter. The foundation is in good condition.
- Recommendation: No corrective action required.

#### **Slab on Grade**

- Analysis: No clear failures of slab can be seen from perimeter. Slab on grade is in good condition.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The structure is built of reinforced CMU load-bearing walls with precast concrete slabs for the 2nd story floor. The superstructure is in good condition.
- Recommendation: No corrective action required.

#### **Roof Construction**

- Analysis: The roof is comprised of precast slabs on the CMU superstructure. The roof is in good condition.
- Recommendation: No corrective action required.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: The exterior walls are brick veneer, and are in good condition.
- Recommendation: No corrective action required.

#### **Exterior Windows**

- Analysis: Exterior windows in rooms are included in the storefront structure with a built in door. Windows are aluminum-framed and double-glazed, and were replaced in 1998. The windows are in good condition.
- Recommendation: No corrective action required.

#### **Exterior Doors**

- Analysis: Doors are commercial grade metal with aluminum frames and electronic locks. The doors are in good condition.
- Recommendation: No corrective action required.

## **Roofing**

### **Roof Coverings**

- Analysis: The roof is slightly sloped, and is covered with mineral surfaced rolled asphalt sheeting. Gutters are outside the roof with the downspouts exposed. This roof was replaced in 1999 and is in good condition.
- Recommendation: No corrective action required.

## **Interior Construction**

### **Partitions**

- Analysis: Partitions are both drywall on studs and drywall on furred CMU walls. Both types are in good condition.
- Recommendation: No corrective action required.

### **Interior Doors**

- Analysis: Interior doors are solid core wood in metal frames. Closets have louvered bi-fold doors. All doors are in good condition.
- Recommendation: No corrective action required.

### **Fittings**

- Analysis: The toilet partitions in the lobby restrooms are in good condition.
- Recommendation: No corrective action required.

## **Stairs**

### **Stair Construction**

- Analysis: The stairs are concrete with steel nosing. The stairs have major spalling and cracking. The stairs are in poor condition. The stair and balcony railings are aluminum and are in good condition.
- Recommendation: Replace the concrete stairs.

## **Interior Finishes**

### **Wall Finishes**

- Analysis: Wall finishes are a combination of vinyl wall covering and painted drywall in the living area. Bathrooms typically have ceramic tile wainscot and vinyl wallcovering. The vinyl wall covering and the painted drywall is in fair condition. The ceramic tile is in fair condition.
- Recommendation: Recover walls with vinyl wall coverings. Replace ceramic tile wainscot.

### **Floor Finishes**

- Analysis: The units have carpet, the restrooms ceramic tile, and the hospitality area has sheet vinyl. All are in fair condition.
- Recommendation: Replace carpet and ceramic tile.

### **Ceiling Finishes**



- Analysis: Ceilings are painted, textured concrete in the living area, and are in good condition. The bathroom and hospitality area have acoustical ceiling tile, which is in fair condition.
- Recommendation: Repaint ceilings in living area. Replace acoustical ceiling tile with painted drywall.

## **Conveying**

### **Elevators and Lifts**

- Analysis: This building does not contain an elevator. ADA accessible rooms are located on the first floor.
- Recommendation: No corrective action required.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: Each unit has an individual rest room containing a lavatory mounted in a built-in countertop, a flush-valve toilet, and an enameled cast-iron tub/shower. Ventilation is a constant volume induced draft system. The plumbing fixtures and countertop are in good condition. The exhaust ventilation is in good condition. The bathrooms were renovated in 1998 but the plumbing lines are original. Two bathrooms have been modified to be ADA accessible.
- Recommendation: Replace entire plumbing system including fixtures.

### **Domestic Water Distribution**

- Analysis: Hot water is produced from an 80-gallon gas-fired water heater with an accompanying hot water tank. The boiler was replaced in 1997 and is in good condition. The tank appears to be original and is in poor condition. The circulating pumps are in fair condition. Some mechanical room piping has been replaced but the building system piping is original and is in poor condition.
- Recommendation: Replace the domestic water system piping and circulating pumps.

## **HVAC**

### **Cooling Generating Systems**

- Analysis: The mechanical system is a two-pipe fan-coil hydronic hot water heating system and chilled water system with one thermostat to control the entire building. The hot water for heating is supplied by a hot water boiler located in the mechanical room. The chiller is located in an equipment yard across the parking lot. The heating and cooling system has condensation leaks, minimal control, and is in poor condition.
- Recommendation: Replace existing mechanical system.

## **Fire Protection**

### **Sprinklers**

- Analysis: This building does not contain a sprinkler system.
- Recommendation: Install new sprinkler system.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: Electrical service is supplied to the building from an overhead pole-mounted transformer bank that goes underground into the mechanical room. Secondary service is 120/208 volt 800 amp main disconnect. Distribution panels are located in the mechanical room and throughout the building to provide power for lighting and receptacles. The electrical service is in fair condition. Lighting is incandescent and is in fair condition. Outlets in the units are insufficient and in fair condition.
- Recommendation: Replace main service and panel to handle increased electrical loads.  
Replace branch circuits, electrical outlets and lighting.

### **Communications and Security**

- Analysis: The fire alarm system consists of hard-wired heat detectors and smoke detector located in each room. The system does not have a connection to the fire department, and is therefore considered to be in poor condition.
- Recommendation: Install annunciator panel, connect to fire department, and install strobes.

### **Equipment**

#### **Other Equipment**

- Analysis: Each guest room contains a hospitality area, which includes base and wall cabinets, counter space, a sink, micro-fridge, and a microwave. All are in good condition.
- Recommendation: No corrective action required.

### **Site Preparation**

#### **Site Earthwork**

- Analysis: The site consists of grass covered yard areas and shared parking lots with access to main roads. The site is graded properly to allow for drainage. The site is in good condition.
- Recommendation: No corrective action required.

### **Site Improvements**

#### **Parking Lots**

- Analysis: The asphalt parking was resurfaced in 1998 but is in fair condition. There is adequate parking for guests.
- Recommendation: Resurface the parking lot.

### **Site Electrical Utilities**

#### **Site Lighting**

- Analysis: The site lighting was upgraded in 1998 and is in good condition.
- Recommendation: No corrective action required.

### **Major Functional Criteria**

- **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in building 3601, and are not included in this building

- **Family Guest Suite**

Room Size and Configuration: The rooms exceed size and configuration requirements.

Renovation Recommendation: Do not recommend adding to this building, because of condition assessment cost is already over the 50% of replacement cost.

- **Public Spaces**

Most of the public spaces are required at the main lodging building on post. Presently these are located in building 3601, and are not included in this building.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>34.61%</b>	<b>\$749,762.50</b>
Beyond Useful Life		\$749,762.50
<b>09 Finishes</b>	<b>8.99%</b>	<b>\$194,769.73</b>
Acoustical Ceiling Tile: Beyond expect useful life		\$3,098.97
Acoustical Ceiling Tiles: Damaged or Failing		\$930.71
Base Tile: Damaged or Failing		\$48,422.00
Carpet: Beyond Useful Life		\$45,266.92
Drywall Ceilings: Damaged or Failing		\$18,398.16
Interior ceilings: Paint Failing		\$344.76
Interior walls: Paint failing		\$9,989.41
Vinyl Wall Covering: Beyond expected useful life		\$5,412.00
Vinyl Wall Covering: Damaged or Failing		\$62,906.80
<b>10 Specialties</b>	<b>0.18%</b>	<b>\$3,941.65</b>
Toilet Partitions: Beyond Useful Life		\$3,941.65
<b>13 Special Construction</b>	<b>6.13%</b>	<b>\$132,884.78</b>
Fire Alarm System: Missing or Inadequate		\$26,052.50
Fire Sprinklers: Missing or Inadequate		\$106,832.28
<b>15 Mechanical</b>	<b>22.05%</b>	<b>\$477,568.71</b>
Boiler: Abandoned in place		\$481.36
Circulator pump: Beyond expected useful life		\$1,335.84
Domestic water system: Beyond expected useful life		\$62,263.19
Heating piping: Beyond expected useful life		\$16,971.32
Hot water storage tank: Beyond expected useful life		\$4,173.40
Pipe, sewer or waste: Beyond expected useful life		\$29,877.15
PTAC: Missing or inadequate		\$127,376.83
Sink & vanity: Replace due to remodel		\$51,678.18
Sink, janitorial: Beyond expected useful life		\$11,370.48
Tub: Beyond expected useful life		\$103,195.66
Water Chiller: Abandoned in place		\$1,701.92
Water closet: Beyond expected useful life		\$67,143.38
<b>16 Electrical</b>	<b>10.95%</b>	<b>\$237,159.00</b>
Branch Circuits: Beyond Expected Useful Life		\$84,615.69
Emergency light: Beyond expected useful life		\$2,286.93
Exit Light: Beyond expected useful life		\$1,346.40
Fixture: Incandescent fixture beyond expected life		\$111,920.06
Fixtures, fluorescent: Beyond expected useful life		\$8,719.04
Main service: Beyond expected useful life		\$28,270.88
<b>19 FF&amp;E</b>	<b>17.08%</b>	<b>\$370,000.00</b>
Hard and soft goods: Beyond expected useful life		\$370,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$2,166,086.00</b>

**Additional Hard Cost (Template: Army Lodging Renovation)**

Parameter Name	Percent	Amount
Spirit	0.50%	\$11,913.47
Force Protection	9.00%	\$215,514.73
General Conditions	10.00%	\$216,608.60
<b>Total Additional Hard Cost</b>		<b>\$444,036.80</b>

**Soft Cost (Template: Army Lodging Renovation)**

Parameter Name	Percent	Amount
Contingency	10.00%	\$261,012.28
SIOH Conus	6.50%	\$186,623.78
Design	10.00%	\$261,012.28
08 MYr Inflation Fct	9.93%	\$329,553.97
<b>Total Soft Cost</b>		<b>\$1,038,202.31</b>
<b>Total Project</b>		<b>\$3,648,325.11</b>

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.81%</b>	<b>\$156,220.35</b>
Parking Lots		\$54,841.60
Site Earthwork		\$101,378.75
<b>03 Concrete</b>	<b>14.10%</b>	<b>\$577,679.95</b>
Floor Construction		\$333,141.15
Slab on Grade		\$75,046.40
Stair Construction		\$19,404.00
Standard Foundations		\$150,088.40
<b>04 Masonry</b>	<b>4.44%</b>	<b>\$182,090.65</b>
Exterior Walls		\$182,090.65
<b>07 Thermal &amp; Moisture Protection</b>	<b>6.61%</b>	<b>\$270,776.20</b>
Roof Construction		\$86,348.39
Roof Coverings		\$184,427.81
<b>08 Doors &amp; Windows</b>	<b>8.80%</b>	<b>\$360,385.52</b>
Exterior Doors		\$8,646.00
Exterior Windows		\$274,560.00
Interior Doors		\$77,179.52
<b>09 Finishes</b>	<b>13.41%</b>	<b>\$549,662.62</b>
Ceiling Finishes		\$82,240.30
Floor Finishes		\$202,772.58
Partitions		\$150,437.44
Wall Finishes		\$114,212.30
<b>10 Specialties</b>	<b>0.07%</b>	<b>\$2,982.76</b>
Fittings		\$2,982.76
<b>11 Equipment</b>	<b>5.56%</b>	<b>\$227,920.00</b>
Other Equipment		\$227,920.00
<b>13 Special Construction</b>	<b>4.41%</b>	<b>\$180,706.43</b>
Communications & Security		\$81,347.91
Sprinklers		\$99,358.52
<b>14 Conveying Systems</b>	<b>4.61%</b>	<b>\$189,024.00</b>
Elevators and Lifts		\$189,024.00
<b>15 Mechanical</b>	<b>18.78%</b>	<b>\$769,541.52</b>
Cooling Generating Systems		\$240,141.44
Domestic Water Dist		\$117,216.00
Plumbing Fixtures		\$412,184.08
<b>16 Electrical</b>	<b>6.36%</b>	<b>\$260,575.48</b>
Electrical Service & Distribution		\$258,643.88
Site Lighting		\$1,931.60
<b>19 FF&amp;E</b>	<b>9.03%</b>	<b>\$370,000.00</b>
Interior FF&E allowance		\$370,000.00
Total Raw Cost	100.00%	\$4,097,565.49

**Additional Hard Cost (Template: Army Lodging New Construction)**

Parameter Name	Percent	Amount
Spirit	0.50%	\$22,536.61
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$409,756.55
<b>Total Additional Hard Cost</b>		<b>\$432,293.16</b>

**Soft Cost (Template: Army Lodging New Construction)**

Parameter Name	Percent	Amount
Contingency	5.00%	\$226,492.93
SIOH Conus	6.50%	\$309,162.85
Design	10.00%	\$452,985.86
08 MYr Inflation Fct	9.93%	\$547,987.08
<b>Total Soft Cost</b>		<b>\$1,536,628.73</b>
<b>Total Project Cost for Replacement</b>		<b>\$6,066,487.38</b>

**INSERT BUILDING D4215 FLOOR PLANS HERE**



# Army Lodging Wellness Recommendation

## Appendix

ROOM / SPACE	1-10 Units	11-49 Units	50-149 Units	150-199 Units	200-299 Units	300-399 Units	400-599 Units	600-799 Units	800+	At Main Facility on Post Only	Note
<b>Public Areas</b>											
Exterior Entrance	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Vestibule	100	100	150	150	200	200	200	200	200		In Main Lodging facilities square footage included in Lobby
Lobby (includes vestibule at Main Lodging facilities)	300-500	300-500	500-800	500-800	800-1000	800-1000	1,000-1,200	1,000-1,200	1,200-1,500	X	Includes square footage of vestibule at Main Lodging facilities
Front Desk	2 station / 100 s.f.	2 station / 100 s.f.	2 station / 100 s.f.	3 station / 150 s.f.	3 station / 150 s.f.	3 station / 250 s.f.	3 station / 250 s.f.	4 station / 300 s.f.	4 station / 300 s.f.	X	
Bell Cart Station	2 carts / 24 s.f.	2 carts / 24 s.f.	3 carts / 36 s.f.	3 carts / 36 s.f.	4 carts / 48 s.f.	4 carts / 48 s.f.	6 carts / 72 s.f.	6 carts / 72 s.f.	8 carts / 96 s.f.		Not required at facilities w/out interior corridors if building is retained.
Breakfast Bar (Seat/Svc)	550	550	550	550	550	550	550	750	1,000	X	Needed at secondary facility, if it is a remote location. CFSC requirement min 550
Passenger Elevators			1 @ 64 s.f. 50-99 rooms 2 @ 64 s.f. 100-149 rooms	2 @ 64 s.f. each	2 @ 64 s.f. each	2 @ 64 s.f. each	2 @ 64 s.f. each	2 @ 64 s.f. 400-499 rooms 3 @ 64 s.f. 500-599 rooms	3 @ 64 s.f. each		If building is over two stories high
Stairs	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each		
Public Corridors	**	**	**	**	**	**	**	**	**		Minimum 6' wide
Public Telephone Area	2 phones / 12 s.f.	2 phones / 12 s.f.	2 phones / 12 s.f.	2 phones / 12 s.f.	3 phones / 18 s.f.	3 phones / 18 s.f.	4 phones / 24 s.f.	4 phones / 24 s.f.	4 phones / 24 s.f.		House phone in secondary buildings. Pay phones & house phones at Main facility
Vending - Full Service	1 per building / 70 s.f.	1 per building / 70 s.f.	70	70	70-105	105-140	140-210	210-280	280+		1 for every other floor to support up to 200 units / 70 s.f. each
Vending - Ice Only	1 per building / 30 s.f.	1 per building / 30 s.f.	30	30	30-45	45-60	60-90	90-120	120+		1 for every other floor to support up to 200 units / 30 s.f. each
Women - Lobby	100	100	200	200	260	260	315	315	350	X	
Men - Lobby	100	100	200	200	260	260	315	315	350	X	
Multi-Purpose Rm	250	250	250	250	250	250	250	250	250	X	
Study Rooms	See Note	See Note	See Note	See Note	See Note	See Note	See Note	See Note	See Note		1 per 25 extended stay units of 250 s.f. each at posts with schools facilities
Guest Laundries	192	192	192-384	384-576	576-768	768-1152	1152-1536	1536-2112	2112+		CFSC requirement 2w/d for every 75 guest rooms
Gear Wash Rooms	At entrance / 170 s.f. each	At entrance / 170 s.f. each	At entrance / 170 s.f. each	At entrance / 170 s.f. each	At entrance / 170 s.f. each	At entrance / 170 s.f. each	At entrance / 170 s.f. each	At entrance / 170 s.f. each	At entrance / 170 s.f. each		Only at facilities with outdoor training
Guest Bulk Storage	See Note	See Note	See Note	See Note	See Note	See Note	See Note	See Note	See Note		1 unit for every 4 family suites of 25 ea. 40 w/circ.
<b>Guest Rooms</b>											
Guest Room - Standard	300	300	300	300	300	300	300	300			
Guest Room - Ext. Stay	300	300	300	300	300	300	300	300			
Guest Room - Suites	450	450	450	450	450	450	450	450			

ROOM / SPACE	1-10 Units	11-49 Units	50-149 Units	150-199 Units	200-299 Units	300-399 Units	400-599 Units	600-799 Units	800+	At Main Facility on Post Only	Note
<b>Back-of-House Areas</b>											
Manager's Office	180	180	180	180	180	180	180	180	180	X	
Assist. Mgr. Off.	-	-	0 50-99 units 120 100-149 units	120	120	120	120	120	120	X	
Front Office Mgr.	100	100	100	100	100	100	100	100	100	X	
Admin. Offices	2 space / 200-250 s.f.	2 space / 200-250 s.f.	2 spaces / 200-250 s.f.	2 spaces / 200-250 s.f.	5 spaces / 500-600 s.f.	5 spaces / 500-600 s.f.	7 spaces / 800-900 s.f.	7 spaces / 800-900 s.f.	10 spaces / 1,100-1,200 s.f.	X	
Cash Room	50	50	75	75	100	100	125	125	150	X	
Luggage Storage	-	-	75	75	100	100	100	100	100	X	
Admin. Conf. Rm.	250	250	250	250	350	350	350	350	350	X	
Housekeeping Off.	120	120	120	120	120	120	120	120	120	X	
Dirty/Clean Linen Stor.	50	50	50	50	100	100	200	200	400	See Note	At all facilities w/out in-house laundry
In-House Laundry	500	500	500	500	500	500	750	750	900	X	CFSC requirement min 500 s.f
Receiving Office	75	75	75	75	75	75	75	75	75	X	
Maintenance Area	100	100	175	175	250	250	400	400	600	X	
Kitchen Prep Room	150	150	150	150	150	150	150	150	150	X	facility, if it is a remote location.
Break Room		140	210	210	280	280	350	350	420		
Staff Toilet - Men			200	100	100	100	150	150	200		
Staff Toilet - Women		100	100	100	150	150	200	200	250		
Access Corridor	**	**	**	**	**	**	**	**	**		
Receiving	150	150	150	150	150	150	150	150	200	X	
Housekeep. Rms.	128	128-512	512-1280	1280-1792	1792-2560	2560-3456	3456-5120	5120-6912	6912+		128 s.f. for each 15 guest rooms
Service Elevator	80	80	80	80	80	80	80	80	80		
Data/Commo Rm.	100	100	100	100	150	150	150	150	150		
Switch Closets	16 *	16 *	16-48 *	48-64 *	64-96 *	96-128 *	128-144 *	144-256 *	256+ *		1 closet of 16 s.f. for approximately 50 guest rooms
Janitor Closet	50	50	50	50	50	50	50	50	50	X	Only at first floor of Main Lodging facility.
Mechanical Room	*	*	*	*	*	*	*	*	*		
General Stor. Rm.	500	500	500	500	500	500	500	500	500	X	
Bulk Storage Rm.	500	500	500	500	500	500	500	500	500	X	
Electrical Room	140 *	140 *	1 per floor @ 140 s.f. each *	1 per floor @ 140 s.f. each *	1 per floor @ 140 s.f. each *	1 per floor @ 140 s.f. each *	1 per floor @ 140 s.f. each *	1 per floor @ 140 s.f. each *	1 per floor @ 140 s.f. each *		One electrical room to serve no more than 100 rooms.
Elevator Equip.Rm.	84	84	84	84	84	84	84	84	84		
<b>EXTERIOR</b>											
Playground (Outdoor)										X	Play ground required at facilities with family stays.
Grounds Maintenance	400	400	400	400	400	400	400	400	400	X	

\* Mechanical/electrical/equipment Spaces to be determined by contractor based on appropriate code and recommended systems.

\*\* Corridors to be determined based on building layout.